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THE OPHTHALMIC RECORD

111

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The June number of the Ophthalmic Record will contain, amongst others, an original article by George E. de Schweinitz, M.D.; Fistula of the Orbit due to Disease of the Lachrymal Division of the Ethmoidal Cells; Operations and Cure; one by George C. Harlan, M.D.; Abscission and Combined Keratectomy; one by Casey Wood, M.D.; Experience in the Treatment of Embolism of the Central Retinal Artery; one by Charles A. Oliver, M.D.; Brief Report of a Case of Fibroma of the Eyelid; one by E. C. Ellett, M.D.; A Case of Chancre of the Conjunctiva. There will also appear Editorials, Reviews, Society Reports and news items of interest to the profession.

The Record particularly desires short practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles when accepted are contributed to the Record exclusively. Illustrative cuts will be made at the expense of the journal, and proofs for correction will be sent to authors when desired. Reprints with covers are furnished at cost. One hundred of these will be presented to authors *gratis* when a request for them is written on the original manuscript. The Record will be issued monthly, and each number will contain about 54 pages of reading matter.

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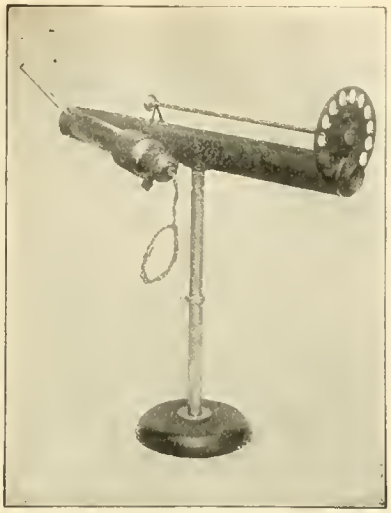

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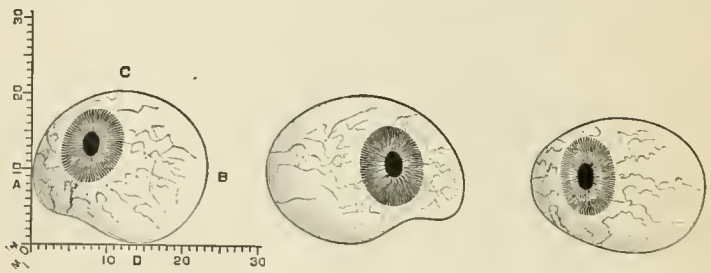

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7. Diameter of pupil?
8. Color of iris?
9. White of eye clear, yellowish, or Bluish?
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THE

OPHTHALMIC RECORD

A MONTHLY REVIEW OF THE PROGRESS OF OPHTHALMOLOGY.

VOLUME VIII. CHICAGO, MAY, 1899. No. 5. NEW SERIES

ORIGINAL ARTICLES.

REPORT OF A CASE OF HERPES ZOSTER OPHTHALMICUS.*

BY ADOLPH O. PFINGST, M.D.

LOUISVILLE, KY.

An apparently healthy woman, 28 years of age, shows two conditions following herpes zoster of the face. On December 1, 1898, the patient observed a small red area on the right temple, followed in a few hours by redness and a "drawing, burning pain" on the right side of the base of the nose. The pain soon spread over the entire right side of the face from the lower border of the nose to near the vertex above. The skin over the painful area became very red as far as the median line, where it terminated abruptly. The burning pain was continuous but less severe than an occasional neuralgic pain accompanying it. Two days later groups of little round blisters began to form on the erythematous base. The contents of these blebs, which varied from 1/8 to 3/8 in. in diameter, were watery when they formed, but soon became opaque and yellow. On the temple and side of the nose several blebs coalesced and formed larger irregular blisters. After several days the vesicles dried up and formed yellowish brown crusts, which after a while dropped off, leaving pits of varying depth and size. With the scab formation the pain ceased almost at once. The entire process of eruption, scabbing and desquamation lasted from ten to fourteen days.

About three weeks after the beginning of the trouble, the patient suffered intolerable itching over the erythematous area, so severe as to keep

*Read before the Louisville Ophthalmological Society, March, 1899.

her awake at night. About the same time the eye-lids began to burn and the eyes became sensitive to light and watery. The general health of the patient had always been good. She was now pregnant in her eighth month. This part of the history was elicited from her, and the family physician who had seen her occasionally. When I first saw her on December 21, 1898, the right side of her face and the scalp, anteriorally, were hyperemic, having a bluish red color in sharp contrast to the left side. Pits of various depth, width and shape were noted in the skin of the right side of the face, particularly on the temple and nose. The lids of the right eye were a little puffy and their edges reddened. There was slight photophobia and lachrymation. The palpebral conjunctiva was hyperemic, otherwise normal; the bulbar conjunctiva injected from the periphery. Around the cornea a well-defined but delicate, narrow zone of vascular injection was noted. The cornea showed in its center a cloudy area about ⅛ x ⅜ in., resembling very much the cloudy cornea of a parenchymatous keratitis, being however more sharply defined. The sensitiveness of the cornea was apparently unaltered. The iris was normal, and responded promptly to atropine. Four days later, the iris evidently became involved, the pupil showing such a marked tendency to contract that atropine (1% sol.) instilled into the eye every two hours kept the pupil only moderately dilated, but round. This irritation passed off in several days with the pruritis of the skin.

On January 5th, three days after having last seen the patient, the cornea showed four or five small, white spots varying from $\frac{1}{32}$ to $\frac{1}{8}$ in in diameter. The opacities were very delicate and superficial but sharply defined. The central macula had grown smaller. Sensitiveness of the cornea was now markedly diminished. The conjunctival side of the upper lid was marked by quite a number of small yellow areas which were apparently in the deeper tissue. The entire lid was covered with these dots, giving the red surface a polka-dot appearance. The larger areas seemed to come nearer the surface and caused some roughness of the lid. In the lower lid, a single area of the kind was found in the middle of the conjunctival side. This condition has remained unaltered. The areas may have grown some smaller. The nebulæ of the cornea increased in number until ail parts of the cornea contained them. They have undergone no apparent change since. Soon after their appearance the circumcorneal injection subsided and the eye returned to normal with the exception of the two conditions just cited. I might add that the fundus was always found normal, V = 20/40.

This case presents two conditions which I believe, from the infrequency

with which I found them referred to in literature, to be of very rare occurrence, viz.: the yellow areas in the lids, particularly the upper and the superficial opacities of the cornea. It may perhaps be of interest to enumerate some of the features of the affections of the eye resulting from or accompanying *herpes zoster* which is limited to the ophthalmic division of the trifacial nerve or one of its branches. (*Herpes Zoster Ophthalmicus.*) Here as in zona in other parts of the body, the trouble begins with acute febrile symptoms and constitutional disturbances, such as headache, dullness, loss of appetite. Severe neuralgic pains mark the beginning of the eruption, or may precede it for a few hours or days. The skin becomes erythematous over the area of distribution of the affected nerve and studded with small, clear, vesicular elevations arranged in groups. These vesicles soon become opaque and white, finally dry up and form dark crusts which, when they exfoliate, leave pits variously deep according to the amount of cutis involved in the ulcerative process. The neuralgic pains, accompanied or followed by the appearance of groups of vesicles upon an erythematous base, are sufficient to make a diagnosis. The disease could possibly be confounded with eczema, but in this there is more itching and the vesicles break and are usually moist. Eczema usually attacks other parts than those in which *Herpes Zoster* is common.

Little is known of the etiology of these cases, the generally accepted view being that an inflammation of the nerve trunk takes place, induced by some constitutional trouble, as syphilis or rheumatism or by traumatism. Bacterial examinations have to my knowledge not been made. Results of the pathological study have been unsatisfactory, although evidence of inflammation along the course of the affected nerve has been observed.

The disease runs its course in about two weeks, leaving as a rule no sequelæ outside of the pitting. Sometimes neuralgic pains continue for a long time after the subsidence of the skin trouble.

The treatment should be paliative, as the disease has a tendency to recover. Phosphide of zinc internally, one-third grain three times daily, has been used to lessen the pain. Galvanism has also been successfully used for the purpose where morphine has failed. The itching can be lessened by the local use of a drying powder of oxide of zinc and starch.

When the ophthalmic nerve, or one of its branches is affected, there is often an involvement of some part of the eye, notably the cornea. A herpetic eruption of very transitory nature takes place, leaving ulcers which invade more or less deeply the corneal tissue and may lead to perforation. According to Haab, the corneal blebs differ from those

of ordinary catarrhal *herpes* or the so-called *herpes febrilis*, in that there is a higher influx of leucocytes and consequently greater tendency to involvement of the iris and hypopion. The cornea not infrequently looses its sensibility, adding thereby to the gravity of the prognosis from sloughing of the cornea and loss of the eye. It may, on the other hand, be hypersensitive.

The only mention which I could find of superficial nebulæ, as presented in this patient, was in the text-book of Fick, who refers to six cases reported by J. Wangler, in which neither vesicles nor ulcers appeared, the only local condition being small opacities lying just below the epithelium.

Jessup, in the *Transactions of the Ophthalmic Society of the United Kingdom*, Vol. 6, mentions nebulæ as one of the sequelæ of corneal complications without describing them.

There is always more or less congestion of the conjunctiva and increased secretion, sometimes of a purulent character. Photophobia and lachrymation are common accompanying symptoms. Herpetic eruption has been observed upon the tarsal conjunctiva. Horner, *Transactions of Ophthalmic Society of United Kingdom*, Vol. 6, speaks of small subconjunctival abscesses on the palpebral surface of the conjunctiva. I believe that such a condition was present in his case, that the little yellow areas are incapsulated masses of broken down tissue resembling pus, caused by trophic disturbances.

A number of cases of serous iritis accompanying *herpes zoster* are on record, also cases in which the choroid and ciliary body were involved.

Many writers have noted that though apparently without adhesions the iris reacts badly or not at all to atropine. Exceptionally the ocular muscles have been involved in the inflammatory process.

A CASE OF MACULAR RETINITIS DUE TO FLASH OF ELECTRIC LIGHT.

BY H. V. WÜRDEMANN, M.D. AND W. R. MURRAY, M.D.

OF MILWAUKEE, WIS.

Illustrated.

The following case is presented for publication on account of the paucity of literature on the subject. In this age of electricity such accidents cannot be so rare as might be supposed.

H. C. B., male; age, 20; occupation, manufacturer; family and personal history good. January 6, 1899, patient presented himself at the

office with the following history: At 11 A. M. on the preceding day he made a short circuit on a dynamo-switch wit a knife blade. One-half inch of the knife blade was burned off, and patient was blinded by the flash for about ten minutes, and for some time afterwards the electric lights appeared a fiery red. Patient continued his work in the afternoon, but his eyes became congested, and he could not sleep that night and experienced considerable pain.

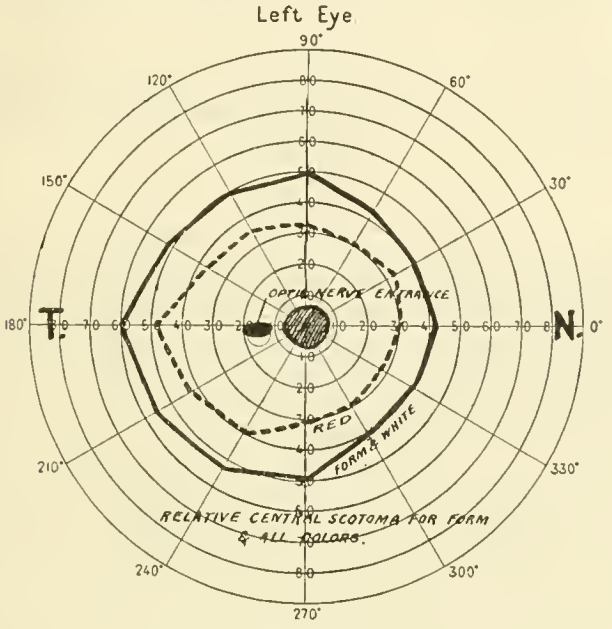


FIG. 1.

Visual Field of Left Eye, Jan. 26, 1899, Showing Central Scotoma.

On examination conjunctival congestion was found. The ophthalmoscope showed the inferior retinal veins congested and the macular region hazy, most marked in the left eye; visual fields contracted with relative central scotoma in the left.

Metamorphopsia right and left. V. R.= 6/XX; V. L.= 6/XXX. Prescribed atropin solution 1%, and confined patient in a dark room. He was seen at his house the following day, when the conjunctival congestion was somewhat lessened and the eyes more comfortable.

Patient seen at the office on the 12th, retinal veins congested and macula hazy; visual fields contracted, relative central scotoma in the left

less marked than on first examination. V. R.= 6/XX; V. L.= 6/XXX. January 16th there was a slight haziness over the macular region; slight relative central scotoma. V. R.= 6/XX; V. L.= 6/XX. January 30th fundi appeared normal; visual fields normal; V. R.= 6/VI; V. L.=6/VI.

This case presented fundus changes similar to those observed in cases of solar retinitis, but there was disappearance of all abnormal appearances and complete restoration of function, while in solar retinitis the injury to the retina is usually permanent.

THE USE OF EGG MEMBRANE IN OPHTHALMIC SURGERY.

BY DAVID H. COOVER, M.D.

DENVER, COL.

The egg membrane has been used in brain surgery, and to close perforations in the membrane tympanum. Its application in ophthalmic surgery has never been used, at least I have not been able to find any literature upon the subject. The first time I used this membrane was about a year ago in a case of symblepharon. Since then in case of a burn, corneal ulcer and after iridectomy where infection was feared.

Case No. 1.—Symblepharon. Right eye. Due to powder burn. The upper eyelid was completely adherent to eyeball from the caruncle to cornea, extending upward and to the median line. So firmly was the lid attached to the globe that the outward excursion was greatly impaired. Operation. The lid was separated from the ball, and all cicatricial tissue removed. This left two raw surfaces too large to be covered by conjunctiva. Instead of mucus membrane or skin a piece of egg membrane was used. Before the operation my assistant, Dr. B. Gilbert, thoroughly cleansed a fresh egg in formalin solution. As soon as hemorrhage ceased in the eye the shell of the egg was cracked and removed from the membrane. With forceps and scissors a large piece of the egg membrane was cut to cover the denuded surface on eyeball, overlapping so the edge could be tucked into a pocket made in conjunctiva below and above to hold the membrane in position. After removing the desired piece from the egg it was immersed in normal salt solution. When trimmed to fit the surface desired, and placed into position, the lids were closed and a compress bandage was applied. Eye examined daily. No pain, no irritation, no displacement.

At the end of ten days the membrane was removed, surface on ball and lid smooth, and no adhesions. Result perfect.

Case No. 2 was that of a large burn on the lower part of eyeball and inner surface of the lower lid of left eye, caused by a flash of hot lead. The burn was deep, and extended from the lower edge of cornea to the *cul-de-sac*. It was treated with ichthyol and vaseline until the sloughing stage had ceased, and granulations began to form and bands of adhesions appeared. They were broken down, and a piece of egg membrane was placed between the burned surfaces. Eye bandaged, no pain, no irritation; the membrane was removed several times, cleansed, and eye washed with salt solution, replaced, and at end of ten days surface found to be perfectly smooth; no adhesion.

Case No. 3.—A deep sloughing ulcer on the cornea of left eye, caused by burn from a hot cinder. In spite of treatment Descemet's Membrane began to bulge, and perforation was imminent. The ulcer was lightly curetted, and doing so perforation occurred and aqueous escaped. Egg membrane sufficiently large to cover the anterior portion of eye was applied. Atropine was instilled, lids closed, both eyes firmly bandaged, and patient put to bed. On the third day the eye was opened and examined. No pain or irritation. Anterior chamber reformed. Iris free, pupil dilated, ulcer healing. Egg membrane and eye cleansed with salt solution, membrane replaced, eye bandaged. At end of second week ulcer sufficiently healed to remove membrane.

Case No. 4.—Iridectomy for recurrent iritis, complicated with dacryocystitis. Before operation the conjunctiva, lachrymal sac, duct and nose were irrigated with Hydrag chlor. corros. solution 1 to 10.000. As soon as the iridectomy was performed and eye cleansed, a piece of egg membrane was placed over the incision sufficiently large to extend well up under the upper lid and down over the cornea. After it was placed in position both eyes were bandaged. As there was no evidence of pain or irritation they were not opened until the third day. Membrane removed. Wound healed and no infection.

From the above cases and results obtained from the egg membrane the following are its advantages:

That it is easily obtained, easily applied, produces no pain or irritation, and is aseptic (providing egg is fresh), secretions do not act upon it, can be removed, cleansed and replaced; it is firm and elastic, and adapts itself to the parts wherever applied.

In Cases No. 1 and 2 the mechanical and therapeutic action was that it prevented the two raw surfaces from uniting, and gave the surface time to granulate and conjunctiva to form.

In Case No. 3 it sealed the ulcer, thereby preventing the escape of aqueous and anterior synechia, gave the ulcer support, and prevented infection.

Case No. 4. The mechanical action in this case was to seal the corneal incision against infection.

In conclusion, I believe this membrane has a wide field of usefulness in ophthalmic surgery, in corneal fistulas, in preventing prolapse of iris, in simple extractions and preventing infection of corneal and scleral wounds.

PYOKTANNIN (BLUE) FOR OPHTHALMIA NEONATORUM.

BY L. R. CULBERTSON, M.D.

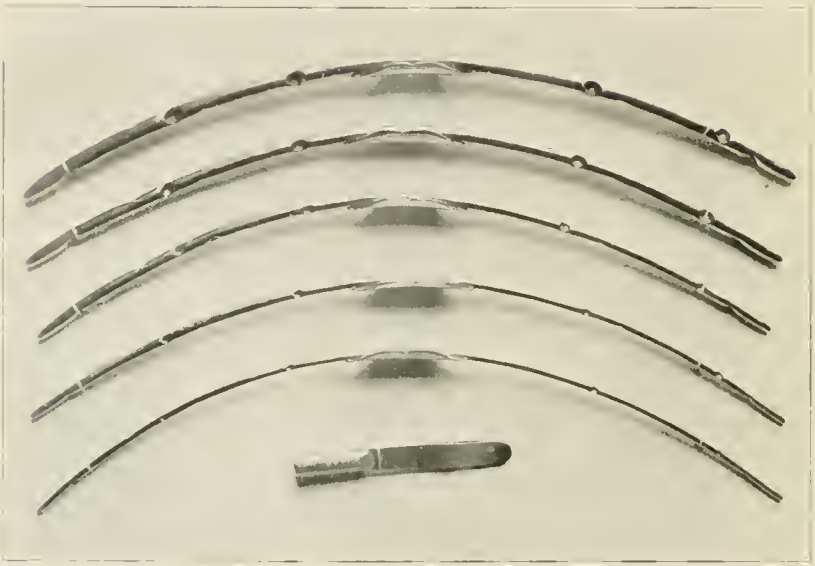
ZANESVILLE, O.

Oculist to U. S. Pension Bureau, C. & M. V. and B., Z. & C. Rys., City Hospital, etc.

Pyoktannin (blue anilene, Mercks) has been used a number of years as a germicide in ocular affections, but in the literature at my command I find nothing on its use in ophthalmia neonatorum or gonorrhœal ophthalmia in the adult. It has been used for some time in gonorrhœal urethritis, vaginitis and metritis.

I have only one case to report and trust that others will obtain as quick results.

The case was seen by the writer some five or six days after its birth. Marked case of purulent ophthalmia. The attending physician had painted lids of both eyes for several days with 3 per cent. nitrate of silver solution, with no benefit. I painted lids for two days with 4 per cent. solution of silver nitrate, with no benefit. Then stopped silver nitrate and used $\frac{1}{2000}$ pyoktannin (blue) injected under lids. Used an all-rubber bulb ear syringe. The nozzle was first smeared with vaseline and then one bulbful of the solution was injected under upper lids every two hours, night and day. The nozzle was pushed up to the upper *cul-de-sac*. Cold cloths were applied to lids every twenty minutes and eye drops containing atropia sulph., cocaine and morphine were used every two hours. Within thirty-six hours after beginning the pyoktannin all discharge had ceased the swelling and inflammation subsiding rapidly. One cornea ulcerated, for which eserine was used and cocaine drops used less often. The injections of pyoktannin were stopped after three days use, as all discharge had ceased. About six drops of pyoktannin were instilled three times daily until ulcer healed and cocaine and atropia discontinued. At the time of writing—twenty-one days from the first time I saw it—the cornea



is healed and only a faint nebula remains, which is clearing rapidly. The parents deny gonorrhœal infection, and as a bacteriological examination was not made I cannot say whether this was a case of gonorrhœal, leucorrhœal or grippal ophthalmia. The mother was suffering from grippe before and after the birth of the child.

The advantage of pyoktannin is that it is bland and unirritating and at the same time a powerful bacteriacide. Nitrate of silver causes suffering and produces great swelling of the lids. If pyoktannin will do as well in the majority of cases as it has in this one, then we will know that we have in it a most powerful and effective agent for the cure of this affection. The general practitioner or the ophthalmologist can instruct the nurse in the use of pyoktannin injections with the bulb syringe the instant any pus appears about the eyes of the infant. I trust others will try this remedy and report the results of its use.

TREATMENT OF DISEASES OF LACHRYMAL DUCT BY CATAPHORESIS.

BY GEO. F. KEIPER, A.M., M.D.

Eye and Ear Surgeon to St. Elizabeth Hospital, St. Joseph Orphan Asylum, Children's Home, Indiana State Soldier's Home, etc.

LA FAYETTE, IND.

Illustrated.

Definition.—Cataphoresis, a process of forcing medicament into living tissues by the constant electric current.

Physics of Process.—By putting the positive pole into a denser medium and the negative in a lighter medium, separated from the denser by an animal membrane and turning on the current, the denser will travel through the membrane into the lighter in direct opposition to osmosis ordinarily observed.

Physiology of Process.—Many remedies may be forced into tissues by placing them at the positive pole of the battery and the negative pole at an indifferent point close by; *e. g.*, cocaine, aconite, chloroform, etc.

Application Therapeutically.—Cupped sounds exhibited. The medicament preferably, argentum nitratum or protargol in vaseline are put in the cups. The probes introduced in the regular way, then connected to the positive pole of the battery by universal connector shown. The patient holds the negative electrode in the palm of the hand. Three to five milliampers of current turned on for five minutes, and the medicament is thus forced into the tissues of the duct.

Results.—Purulent inflammations of the duct and sac yield better to this form of treatment than any of the older methods.

VARICOSE VEINS IN THE ORBIT.*

BY R. DENIG, M.D.

NEW YORK.

Similar cases have been occasionally described—one of the first by Dr. Gruening, New York. These cases have been classified according to the location of the varix : First class of cases, in which the varix is situated behind the eyeball ; second class, in which the varix is situated more anteriorly, near the top of the eyeball ; third class, in which it is situated on either side of the eyeball.

In the first class of cases the varix cannot be seen or palpated, but produces an exophthalmus, when the patient pronates the head, or upon compression of the jugular veins or on closure of the mouth and nostrils.

In the second class the varix is palpable and also mostly visible, and exophthalmus is likewise produced. In the third class of cases, in which the varix is placed laterally, the varix protrudes on pronation of the head, but the exophthalmus is not seen.

In some cases a slight degree of enophthalmus has been noticed in the erect posture of the patients. This has been explained by the theory, that the abnormal filling and emptying of the varicose veins causes a relaxation of the ligamental structure of the orbit and an absorption of the orbital adipose tissue.

Regarding the differential diagnosis it is often very difficult, to exclude a cavernoma of the orbit. But we would hardly expect a cavernoma in cases in which the tumor exists for a longer time, and where there are no signs of a compression of the optic nerve or retinal vessels, although one case of optic nerve atrophy, caused by rupture of varicose veins and orbital hemorrhage has lately been described. Neither would we expect a cavernoma in such cases, in which the exophthalmus perfectly disappears or even a slight degree of enophthalmus becomes manifest in erect posture.

As to the etiology, the theory exists, that a congenital predisposition of the orbital veins (supra-orbital vein) may cause the varix. It has been suggested that the venous walls are congenitally deficient. Perhaps a

*Case presented before the *Academy of Medicine*, of New York. Section on Ophthalmology, January 16, 1899.

congenital abnormal narrowing of the superior orbital fissure may be an etiological factor.

In my case the tumor began one year ago. The case belonged to the second class of cases mentioned above. The tumor of the varicose veins is slightly prominent; it is near the top of the equator bulbi, and can be easily palpated. There is a slight degree of enophthalmus in erect posture, a slight ptosis, no paralysis of any muscles as has been described in some few cases. Both optic nerves are perfectly normal, there is no hyperemia of the retinal vessels present. No cause of the beginning of the trouble can be ascribed by the patient. No family history. Patient is about fifty years of age. General health is said to be in good condition. There are two other small varices on the underlip of the size of a pea; they are said to be congenital. Patient has been suffering from hemorrhoids for the past three years and has had a varix on the left leg for about six years, which finally disappeared about two years ago.

There is one thing quite exceptional in this case: As already stated, the varix ought to produce an exophthalmus, as it belongs to the second class of cases mentioned above. But on pronation of the head a swelling of the varix only and no exophthalmus takes place; the eyeball seems rather to recede than to protrude. Our explanation for this is, that the filling of the varicose veins is more pronounced anteriorly than posteriorly in our case, because in all probability the blood-vessels are more dilated anteriorly in this set of veins.

As regards treatment, bandages or injection of sesquichloride of iron and electrolysis have been proposed, in many cases extirpation of the varicose veins is the proper treatment.

ALBUMINURIC RETINITIS AS AN ELEMENT OF PROGNOSIS IN BRIGHT'S DISEASE.

BY F. T. ROGERS, M.D.

PROVIDENCE, R. I.

While the presence of albumin in the urine is sufficient to excite alarm for a patient's welfare, it must not be forgotten that it may be compatible with present perfect health; indeed many clinicians claim that there may be physiological albuminuria, meaning by the term, however, that while it is not a universal physiological factor, its presence and continuance may show no evidence of disease and must be regarded as physi-

ological rather than pathological. Such conditions are found in many infants immediately after birth, in adolescents, in pregnancy and in those cases which are termed cyclical and intermittent; yet in general, as stated by Osler, "The presence of albumin in the urine in any form and under any circumstances must be regarded as indicative of change in the renal or glomerular epithelium."

Such doctrines have been taught to most of us and represent our belief to-day that albuminuria indicates a morbid process going on in the kidney and, when associated with other signs of Bright's disease, the prognosis is unfavorable.

When one is forced to admit to patient or friends the existence of a grave disease like acute or chronic nephritis one of the first questions asked and one of the hardest to answer is, "How long will it be before the fatal termination?"

I have been led to study the cases of albuminuric retinitis which have come under my care during the last five years and to review the literature of the subject in order to discover whether the presence of this complication of Bright's disease affords us any definite knowledge of the probable duration of the disease.

The form of retinitis associated with albuminuria occurs usually in the chronic forms of kidney disease and is noted rather as a confirmation of diagnosis than indicative of it, but it not infrequently happens as in several of my cases that the uremic symptoms, such as headache, nausea, vomiting and frequent micturition, have not sufficed to call attention to the seat of the disease until sudden failure of sight revealed the condition. In severity it varies from slight impairment of sight to complete blindness. The first stage of the disorder as seen by the ophthalmoscope is evidenced by an increase in vascularity. The retina for a space of 3 to 5 mm. around the disc becomes swollen, fine vesicles of a grayish color appear, the retinal veins dilate unequally and grow tortuous while the arteries contract.

In certain cases, as in scarletinal nephritis, the condition may not progress beyond this stage and ultimate recovery may occur, but if resolution does not occur there appear numerous whitish spots and points of extravasation of blood in the retina. Some of the white spots noted in a typical case may be atrophic, but certainly some are not, as they have been noticed to increase while under observation without any hemorrhage.

The picture of albuminuric retinitis is one so characteristic that one often hazards the diagnosis of nephritis even before a careful urinalysis

is made. In making such a diagnosis, however, it must not be forgotten that exactly similar ophthalmoscopic appearances have been seen in diabetes and descending neuritis and described by Jaeger, Græfe and Bonschut and it is well not to make a diagnosis without confirmation.

Both eyes are usually affected, indeed some authorities say always, but there are recorded numerous cases of unilateral retinitis differing, however, in no marked degree from the usual types.

The nature of the kidney lesion in a measure determines the character of the retinitis which, according to Earles in the *Birmingham Medical Review*, accompanies 33⅓% of cases of Bright's disease. Although the characteristic and severer forms are not so frequently found, the disturbance of circulation and retinal changes which lessen visual acuity are undoubtedly present in even a larger proportion of cases, and a careful and systematic examination of the eye ground of all patients suffering from any form of Bright's disease would afford valuable information to both physician and patient, while adding somewhat to the sum of human knowledge, the privileged task of the physician and the one thing making our profession a learned one and not a trade.

We must make a distinction between the albuminuric retinitis of Bright's disease and that occurring in pregnancy, as well as the amaurosis of uremia which has not the same prognostic value. The albuminuric retinitis of pregnancy has been noted as early as the third, but more frequently in the later months of the pregnancy. In these cases an added importance is attached to the condition regarding the advisability of the induction of premature labor. According to Howe in the *American Journal of Ophthalmology* this procedure is indicated only in the early months, and Randolph concludes from personal observation that retinitis occurring during the last seven weeks of pregnancy is of less import in so far as sight is concerned, and does not call for induced labor inasmuch as statistics show that in many cases sight is restored. Silex, in *Annales d'Oculistique*, 1895, states that in twenty-six patients with albuminuric retinitis of pregnancy eleven recovered more than one-sixth vision and ten a lesser degree, while only five were blind, and concludes that the condition of the retinal vessels should decide the question of interference.

Roosa states that in uremic amaurosis there is absolutely no ophthalmoscopic change. Such certainly may be the case, but exception may be taken to such a sweeping assertion, as many cases testify.

Albutt, in his work on *The Ophthalmoscope in Diseases of the Kidney* (London, 1871), calls attention to this difference between albuminuric retinitis and uremic amaurosis, and states that the second may completely

pass away as the other uremic symptoms subside, or may complicate and be secondary to the graver form.

The universal prognosis is grave. Noyes, quoting Bull (103 cases), states that 50% died during the first year, the majority in six months, and 17% in the second year.

Schmidt-Rimpler says: "Death occurs in from a few months to one or two years."

Norris and Oliver say the prognosis is always bad save in acute cases, and death may be expected in a few months.

Bearing in mind that the retinitis never precedes nephritic degeneration, although frequently a symptom which calls attention to the condition, we are prepared to consider its prognostic value, not in those cases occurring after scarletina or during pregnancy, but solely in chronic Bright's disease.

Aside from hospital reports there are at hand few statistics upon the subject, and beyond the report of Belt before the Ophthalmic Section of the American Medical Association, no attempt has been made to draw conclusions from statistical tables. Individual cases of prolonged life after retinitis is noted are reported as exceptional cases from the general rule and, as such, worthy of record.

Belt, in the paper quoted, endeavored by personal correspondence with ophthalmologists to learn the average duration of life of patients seen in private practice suffering from this form of retinal disease. He reports 100 cases whose subsequent history was traced two or more years. Of these 10% died in three months, 42% in six months, 21% in twelve months, 5% in eighteen months, 6% in two years, 6% lived over two years. Summarizing: 73% died within a year; 94% died within two years.

Combining with his own statistics the findings of Hartridge (5 cases), Anderson (3 cases), Snell (8 cases), Possaner and Haab (39 cases), he found that 62% died in one year, 85% in two years.

Of hospital cases, the reports of Possaner and Haab, Miley, Bull and Gruening (187 cases), 65% died within one year and 93% within two years. Of the total (419 cases), 72% died in one year, 90% within two years, and only 9% lived over two years.

Of the physicians who responded to Belt's inquiries, Callan of New York had seen a case which lived nine years; Stevens of New York, eleven years; McKay of Washington, three and one-half years; Young of Burlington, five years. All the rest stated that their cases had not lived two years.

I have records of eighteen cases and but four are living, and of these

but one has been under observation for more than two years. The other three were seen respectively five months, four months and two months ago. One patient is known to be dead, but the exact length of time which elapsed after the retinitis developed before death occurred is unknown, but it was within two years. One patient died three years after the onset of the retinitis. There are, therefore, fifteen cases whose histories are known which have been under observation for at least two years. Of these but one is living. They may be tabulated as follows:

	Died within few days.	Died within three months.	Died within nine months	Died within twelve months.	Died within eighteen months.	Lived more than 24 months.
Mrs. W. C.				1		
Mrs. J. C.		1				
F. T.					1	
Mrs. A. D.			1			
J. Q.					1	
G. J. W.		1				
E. C. D.					1	
E. H. R.			1			
E. D. D.						1
W. L.	1 (one day)					
Mrs. H. W. L.		1				
Mrs. L. B. T.				1		
A. J.	1 (one day)					
Mrs. E. T.		1				
E. P.						1
Total	2	4	2	2	3	2

Died within few days	13.3%
Died within three months	40%
Died within nine months	53%
Died within twelve months	66%
Died within eighteen months	86%
Lived over two years	13%
Died within one year	66%
Died within two years	86%
Lived over two years	13%
Lived over three years	6%

Comparing these results with the final statistics of Belt of 419 cases, the percentages are not dissimilar. Of my cases 86% died within two years and 90% of all, 13% lived over two years and 9% of all.

Three or four of the cases are peculiarly instructive.

Mrs. T. was first seen in 1891, when there was, with a correction for myopic astigmatism, a vision of 0.5 in each eye. In November, 1897, she was again seen with 0.5 vision in right eye, but with only 0.2 in left eye, and with well marked albuminuric retinitis in that eye. Her physician had not previously detected evidence of nephritis. The urine was examined and albumin found in large quantity. Two days later the right vision had dropped to 0.2, the left to less than 0.1. A decidedly unfavorable

prognosis was given to the family physician, which, however, was not accepted. On January 16, 1898, she died suddenly in uremic coma.

A. J., with history of kidney disease, had been treated by a homeopathic physician for a month for anemia. Following a sudden failure in sight to less than 0.1 he was sent to me for examination. Well marked albuminuric retinitis with abundant and fresh hemorrhages was found in each eye. Unfavorable prognosis was given, and at the request of the physician I sent him to the Rhode Island Hospital. He died the next day in uremic convulsions.

Another case seen in consultation died the following day, and although there had been great loss of vision the urine had been examined but once, and because a negative result had then been obtained, it was not thought worth while to make a second one.

A fourth case occurred in which there had been no suspicion of Bright's disease till failing sight and a retinitis called attention to it.

These cases serve to show the value of a careful examination of the eye-ground in all cases of suspected or existing nephritis.

E. C. D. was first seen in September, 1897. He gave a history of albuminuria in greater or lesser degree for three years. There was then present an ulcerative keratitis and active neuro-retinitis of the right eye and a retinitis of the left, vision being reduced to large objects. Albumin, 1.8 per cent. A month later the amount of albumin was 2 per cent, with greater loss of sight. From October to December, under a strict diet, the eye symptoms gradually improved. In December he fell into the hands of a quack, who promised him a complete and speedy cure and, to do him justice, there was a marked improvement in both the general condition and in the eye, and the patient soon resumed his business. During the next six months he was seen occasionally and apparently well, although the vision was impaired. November, 1898, he developed uremic coma and died.

In my experience these cases are all similar. But one of the cases seen two or more years ago is still living and the three now under observation I have no reason to believe will be exceptions to the rule.

The result of the statistical study is, therefore, briefly, that about seven patients out of ten who develop an albuminuric retinitis during the course of either of the three forms of chronic nephritis, will die within a year, and nine out of ten within two years.

"FOREIGN BODY IN THE IRIS THIRTY-TWO YEARS."

BY M. T. JAY.

PORTLAND, IND.

Mr. Moore, age 44, consulted me in regard to his right eye September 18, 1897. Slight iritis, photophobia quite severe, considerable injection of subconjunctival vessels. The patient being a very intelligent man, gave the following clear statement of his case: When he was eleven years old—thirty-two years ago—he was walking one day from his father's barn to the house, holding in his left hand a small piece of stone and in his right hand a hammer with which he was tapping the stone. Suddenly he felt a stinging sensation in his right eye, with severe pain following. He covered his eye with his hand and rushed to the house, where his mother bathed the eye and resorted to other domestic remedies. He says his eye was "sore" for two months, but finally cleared up and that he never had any more trouble or had anything happen to his eyes in any way. States very positively that his eye has not received any injury since that time.

The winter preceding his visit to my office he states he had a mild attack of "sore eye," but that it quieted down again and remained so until two weeks prior to his visit. It then became painful, and in the condition I find upon examination. Eye is very sensitive to light, and somewhat painful, iris responds only feebly to light, and retains a round pupil. On temporal side of iris is a small grayish body as large as a pin head, partly embedded in iris and partly held by minute bands extending from posterior surface of cornea. Over the body is a faint nebula extending through entire cornea, showing the wound of entrance. Around the body the iris is much absorbed, so that while I have said the body was embedded in the iris, it is really held in place by very fine fibrous bands, showing that the absorption has taken place through the whole thickness of the iris. The body is perhaps twice as long as it is thick, with the long axis extending through the meshwork, the result of absorption.

I have examined this patient several times since, and while the inflammation has subsided, there is still a slight photophobia and the body, whether it is a chip of stone or a piece of the hammer, can be very plainly seen. Advised an operation, but patient thinks he will wait awhile.

REPORTS OF SOCIETIES.

THE LOUISVILLE OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

STATED MEETING, MARCH 11, 1899.

The President, Dr. J. M. Ray, in the chair.

Dr. Adolph O. Pfingst reported a case of *Herpes Zoster Ophthalmicus*. (See page 217).

Discussion.—Dr. W. B. Pusey remembers to have seen one case of this character. He thinks if the iris were not involved, that eserine would be of more advantage than atropine, because you want to shut out as much light as possible where the cornea is involved.

Dr. T. E. Converse has only seen a few such cases, and in all except one of the four or five, there was a marked history of rheumatism. Under the administration of the salicylates the pains as well as the herpes disappeared. He used eserine instead of atropine in the eye. In one case only was the cornea involved; the conjunctivæ were involved in some of the cases; in one of them only the upper lid.

Dr. A. W. Smyth saw one case of this kind in the clinic of Doctor Knapp when in New York last fall, in which there was a herpetic eruption upon the cornea, and has also seen one case here since.

Dr. Wm. Cheatham has seen a good many cases of *Herpes Zoster* about the eyes and face. The eruptions upon the conjunctiva are similar to those on the skin; they do not rupture, but dry up. A great many causes have been assigned for *Herpes Zoster Ophthalmicus*. He saw one case that he was sure was the result of an error of refraction. The patient had two or three relapses, when change of glasses would be followed by complete relief. According to recent literature some of the cases result from bad teeth. He thinks in Doctor Pfingst's case the trouble might have been the result of pregnancy, and delivery of the child has relieved her of all the after effects, because sometimes the pain is greatest after the eruption has disappeared.

As to the pathology of herpes: It is looked upon as a vaso-motor

paralysis with dilatation of the vessels. Woakes, of London, advises camphor internally and locally for the cure of the tobacco habit, which he claims to be a vaso-motor paralysis as a result of the nicotine poisoning; and the pathology of herpes being the same, camphor has been used internally and externally with good results. But in the stage of pain it is said that quinine is better. According to the latest investigations in regard to quinine by Holden, it would answer in these cases very well by contracting the blood vessels. If it is due to a vaso-motor paralysis with dilatation of the vessels, and quinine contracts the vessels, it would seem to be indicated in these cases.

Dr. Cheatham's treatment would be galvanism, phosphide of zinc, camphor and quinine; he would correct any irritation about the nose or teeth, especially if it is about the fifth nerve. He does not believe he would use eserine. If there is any photophobia the cause must be in the deeper tissues. He does not see how you could get any photophobia from involvement of the cornea when the cornea itself is anesthetic; we can have paralysis of the sixth and seventh nerves: we might have actual ptosis. He would be on the lookout for iritis, and would rather use atropia than anything else locally.

Dr. A. O. Pfingst: The atropine was used in this case as the pupil at one time showed a marked tendency to contract. The books speak of diminished tension in this condition which would hardly indicate the use of eserine. In most cases there is no occasion for the use of either a myotic or a mydriatic.

As to the pathology, we believe there is some direct lesion in the nerve itself, as we find it usually confined to certain nerves or branches.

Dr. J. M. Ray: Cases of *Herpes Zoster Ophthalmicus* are interesting, and in his experience persistent in their annoyance for a long time. He has in mind a case in which the local condition in the conjunctiva and cornea was severe, and even now, eighteen months after the attack, the neuralgia persists. He watched this case carefully for the eye lesions. A bleb appeared on the conjunctiva and the cornea became steamy over a circumscribed area, and lost its epithelium, but no bleb showed itself on the clear cornea.

The most annoying part of this case to treat was the tingling pain extending down the side of the nose, the corneal anesthesia and the lachrymation. Large doses of the iodide, galvanism, etc., were tried without avail. Most relief was obtained by a mild faradic current applied over the distribution of the fifth nerve.

Dr. A. W. Smyth read a report on *Subconjunctival Injections in*

Interstitial Keratitis and Sclero-Keratitis. He said that since their introduction into ophthalmology as a remedial measure about thirty-five years ago, they have been more or less extensively employed with varying degrees of success.

This subject was revived about seven years ago, since when it has, like every new procedure when first announced, had to go through several stages of development. At first, owing to excessive enthusiasm, they were recommended for nearly every disease of the eye; then followed a reaction, and they were deemed of no use whatever, until at the present time he thinks they have found their true position in ophthalmic therapeutics and are of undoubted value in chronic and relapsing infiltrative diseases of the cornea, iris and ciliary body. He said this could be proved theoretically, experimentally and practically. The fact is now established that the cornea is traversed by anintricate system of lymph lacunæ connected by delicate canaliculi which communicate at the sclero-corneal margin with the lymphatic network of the sclera. Thus it is evident that the exact sight of the morbific lesions can be reached through the lymph channels, and any remedial measures brought to bear on this system must necessarily influence the disease.

That sub-conjunctivally injected fluids have this lymphagogue action has been shown by the latest experiments of C. Mellinger on rabbits, thus causing complete absorption of an injected emulsion of India ink. The explanation of this result has been given as follows: certain crystalline substances among which chloride of sodium stands first, withdraw water from the tissues in proportion to their molecular composition and to the strength of the solution. Sub-conjunctivally injected, it enters the lymph spaces of the eye and tends to extract an excess of fluids from that organ. Thus is induced a more active elimination of the elements of decomposition, necessarily bringing about a more active supply of new nutritive substances from the blood, which naturally results in a more rapid reformation of the changed tissues.

He reported two cases showing the benefit of this method of treatment. Case 1, Mr. S., 30, had rheumatic iritis and sclero-keratitis which had resisted the ordinary remedies for seven months. Then a sub-conjunctival injection of a 1 to 3000 bichloride solution was made and repeated in five days. Ten days later the eye was perfectly free from inflammation and in a better condition than it had been for seven months, vision 20/20—. Case 2, Mrs. A., had rheumatic iritis last spring, that yielded to treatment in two weeks. In November a relapse occurred and with it a sclero-keratitis which persisted over two months. A sub-conjunctival

injection was made, with improvement in two days. This was repeated in one week with the result that two weeks later a small area of darkish discoloration was all that represented the location of the inflammation.

It is very rare that more than a slight thickening of the conjunctiva results even after a large number of injections.

Following injections of a bichloride solution is a burning sensation in the eye, and some headache for a few hours; this however may be greatly relieved by hot applications. The sodium chloride solution, on the other hand, gives practically no discomfort, and is probably just as beneficial as the results obtained are from the lymphagogue action rather than from any specific action of the bichloride.

Discussion.—Dr. C. Joyes has used sub-conjunctival injections of bichloride in two or three cases, but the results were not such as to encourage him in their use.

Dr. Wm. Cheatham has not used sub-conjunctival injections recently. He used them persistently for a while, but never had results that justified their continuance. He has gotten better effects from such injections in some forms of iritis than in the various forms of keratitis. He has used the normal salt solution, also solutions of bichloride; his experience has been that the patient complains of a great deal of pain from the bichloride. He has also used pilocarpine, and has gotten good results from this, either alone or combined with salt solution. He thinks the biniodide of mercury would be better than the bichloride; it coagulates less and the effect would be quicker. The cyanide of mercury is soluble and would also be better than the bichloride.

Dr. T. E. Converse three or four months ago mentioned the case of a child fourteen months old that had an ulcer of the cornea. The child had acquired syphilis, having contracted it from a colored nurse, the chancre appearing on the side of the nose when it was three months old. When it was fourteen months old an opacity of the cornea formed resembling interstitial keratitis. In that case he tried the bichloride of mercury internally, and also inunctions of mercury, but it did not improve. He then gave four sub-conjunctival injections of bichloride 1.5000 two weeks apart without improvement, and had to discontinue it as the mother complained of the pain it caused the child. He combined a little sodium chloride with the bichloride solution, which did not cause so much pain. He gave the child four or five more injections, and the condition commenced to clear up, and now there is only a slight haziness of the cornea. He has not used this method of treatment in other eye troubles.

Dr. S. G. Dabney has not used sub-conjunctival injections to any extent. Several years ago when this method of treatment was most written about he used it in a few cases, but did not see much benefit from it in scleritis and keratitis. He has never used it in the deeper seated affections. To tell the truth he has been a little skeptical about it, and has not been inclined to believe a good many of the favorable reports. Certainly Dr. Smyth's case sounds like there was something in this treatment.

Dr. J. M. Ray began using sub-conjunctival injections several years ago. He tried them in a large number of cases in his clinic at the University of Louisville, and also in private practice. Dr. W. O. Bailey, when with him, read a paper on the subject, reporting several cases that we had treated in this manner. From that time to the present he has used this method in obstinate cases of interstitial keratitis, relapsing episcleritis and sclero-keratitis, conditions which we all know are so very persistent and obstinate to treatment. In drifting around he tried sub-conjunctival injections in these cases, and it has done more good than anything else.

He can recall two cases, the history of which he gave to Dr. Bailey when he read his paper on the subject where decided beneficial results followed this method of treatment. One was a young lady sixteen years of age, who had a persistent interstitial keratitis; the cornea eventually cleared up fairly well; following this she had a scleritis with marginal opacity of the cornea. It looked as if the eye was going to be lost by reason of the development of a large scleral staphyloma. In desperation we commenced sub-conjunctival injections of bichloride, 1.5000, and after four or five injections the condition improved even beyond our best expectations. From that time to this Dr. Ray has in certain cases practiced sub-conjunctival injections. In cases of interstitial keratitis in children from eight to twelve years of age he hesitates about using this treatment because of the discomfort it entails. After the first injection you have to struggle with the child in order to get it to submit to further injections.

He has often used this method in cases of rheumatic iritis and rheumatic sclero-keratitis with good effect. In such cases the pain is lessened and the iris responds more rapidly to the mydriatic.

He believes that there is a place for sub-conjunctival injections in ophthalmic therapeutics. He has yet to see a case in which he regretted their use, and he shall certainly continue to use them in selected cases.

Dr. A. W. Smyth: In the chronic, persistent, and obstinate cases that

Dr. Ray has mentioned, the injections have been of decided value. There has been marked improvement in some of the cases under injections of the salt solution, there is practically no pain, and the patient is willing to undergo the second or third injection. We have seen no bad results following this method of treatment. Of course, if you strike a small vessel in making your puncture, you might have a small sub-conjunctival extravasation of blood, but that soon clears up and patients seem to be benefited a great deal by this method of treatment.

Dr. Wm. Cheatham reported a case of *Leuco-Sarcoma of the Choroid.* The patient from whom this eye was removed came to this city in December, 1898, for the purpose of consulting Dr. Cheatham. She did not report, however, until five days ago. She was an intelligent woman and had watched her own case closely. She had noticed only for a short time that her eye was defective. When Dr. Cheatham saw her it was blind. There had never been great pain. The eye appeared glaucomatous, and tension was increased. He found the inner part of the retina attached; outwardly the vitreous appeared about three-fourths full of a yellowish-looking mass, showing through a detachment. The eye was removed this afternoon. The specimen is before you. It appears as a light yellowish mass springing from the choroid on the temporal side. He cut the nerve long, and left considerable tissue on the sclera. You see now the rounded mass occupying the greater part of vitreous and to inner side of the nerve, a black mass has presented on the outside of the sclera. He took it to be a leuco-sarcoma.

He has had a run on growths of the eye within the last twelve months, and has two or three other specimens where the growths were extirpated. This woman told him that the first symptoms were noticed a few months ago. She is forty-two years of age, with a history of no disease in the family, but he believes pathologists now say that cancer is not inherited.

Discussion.—Dr. S. G. Dabney: The growth in this case was exceedingly rapid, as it was first noticed but five months ago. Dr. Dabney presented a specimen to this society some time ago similar to the one shown by Dr. Cheatham, but in that case there was a typical course, the disease having lasted for eighteen months.

Retinal Glioma.—Dr. J. M. Ray showed an interesting specimen, but unfortunately very little clinical history. It was sent him by a friend in the country who says it was removed from a child three years old. The reason for removal being great exophthalmus, blindness and pain. The family did not know how long it had been developing; no family history was sent. The specimen as received by Dr. Ray was the eyeball with an

external mass one-third the size of the globe encircling the optic nerve. The specimen was frozen and divided; he found a yellowish and brownish streaked mass filling the entire globe. The lens is pushed aside, and its edge presents toward the cornea. The mass has invaded the iris and fills the anterior chamber. All the normal elements seem invaded by the neoplasm. The cornea is intact and externally presents its normal curve. The growth perforated the sclera at the posterior pole around the optic nerve. The growth rapidly returned in the orbit and now, five months after its removal, he understands is rapidly extending. He presents the microscopical history kindly made by Dr. Pfingst.

The microscope shows the entire eyeball filled with tissue made up almost wholly of round nuclei around which no protoplasm is visible. Between the cells a scant amount of granular intercellular material is seen. The neoplasm has perforated the sclera on both sides of the optic nerve and invaded the nerve trunk. It has also infiltrated the cornea and sclera, particularly the latter, so that bands of scleral and choroidal tissue can be seen stretching through its substance. The iris is intact, the tumor projecting through the pupil and filling the entire anterior chamber. The new formation is rich in thin walled blood vessels and contains a large number of hemorrhagic areas. Variously sized areas of degeneration (fatty) some quite extensive, are scattered throughout the tissue. As the specimen was not fresh enough to be examined by the modern staining methods (Golgi, Mallory), it was examined only after the common hematoxyln-eosin. method. Yet the abundance of nuclei without visible protoplasm surrounding them, the scant amount of intercellular material, rich blood supply and the degenerated areas along with the macroscopic appearance would indicate almost with certainty that you had to deal with a case of Glioma.

Discussion.—Dr. Wm. Cheatham: Some years ago we had a family of gliomas in the city. A man had a large family of children, all apparently healthy; there was no history of cancer in the family upon either side. Several healthy children were born, then one which soon developed a glioma, and the eye was removed. Dr. Simon Flexner reported that the tumor was a new growth of the retina, not a true glioma. The baby finally died of softening of all the bones of the body. In the course of time another baby came, and that was healthy. Two other children were born later, both had glioma, and both died the same as the one previously mentioned, making three cases of glioma in one family.

Dr. T. E. Converse reported a *peculiar accident to the left eyelid.* The following case is of some interest on account of the peculiarity of acci-

dent and the excellent result following. A boy fifteen years old fell face down on a perfectly smooth marble surface and had cut or lacerated the upper lid of left eye. When Dr. Converse arrived at the place of the accident he found a cut one inch and a half long parallel to the margin through the upper lid just above the tarsal cartilage which had cut all the tissues through to the conjunctiva. The vessels were picked up and twisted. He pulled forward the elevator of the lid and stitched it with three catgut sutures to the upper edge of the tarsal cartilage and then closed the skin with four silk sutures and the wound was antiseptically dressed. Four days afterward the sutures in the skin were removed, but the catgut sutures are still buried. He saw him yesterday, ten days after removing sutures from the skin, and there is as good movement of the lid as of the right eye and there is not the slightest indication of ptosis. The peculiarity of this case is that there should have resulted such an extensive injury to the eyelid from a fall upon a perfectly smooth surface.

T. E. Converse, M.D., *Secretary.*

OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

Ordinary Meeting held March 9, 1899.

Implantation Cysts of the Iris.—Mr. Devereux Marshall read this paper, which he remarked was more of the nature of a demonstration than a set paper.

He recorded three cases of epitheliel cysts of the iris which he had recently examined and showed photographs in the lantern of the points of interest which each exhibited.

The first case was that of a boy aged 12 years, whose eye was wounded 8 years before. It remained quiet until 3 months before removal, since which time it has been painful and irritable. There was found to be a crescentic-shaped scar of the cornea to which the iris was adherent. At the bottom of the anterior chamber there was found a large cyst. On further examination the walls were found to be formed by the iris which is split into two unequal parts, the iris itself is so atrophied that at one place the wall is composed solely of epithelium.

The second case was that of a man aged 17, whose eye was wounded 7 years ago with a piece of wood, and it remained quiet until it received a severe blow two weeks before removal. A small cyst was then found at the upper and inner part of the A. C. The anterior wall of this was

composed of an extremely thin piece of atrophied iris lined with epithelium and adherent to Descemet's membrane. Its posterior wall was composed of the greater part of the thickness of the iris, the epithelium was laminated and similar to that of the cornea.

The third case was that of a man aged 29 whose eye was wounded some years before and had recently become painful and quite blind. The eye was enucleated and in the A. C. was found a small mass near the inner corneo-scleral junction. It had developed in the muscular part of the iris. The cyst was found to be lined with epithelium which had undergone great proliferation, so much so that its cavity was filled with degenerated epithelial cells which had become shed, and having no place of escape had become collected together in the interior of the cyst, thus giving rise to the dense white appearance noted during life.

The epithelium in this case apparently arose from a portion of cutis which had become driven in at the time of the original accident, whereas in the other cases the epithelium of the cornea was almost certainly the cause of the cystic development.

The question of cysts in general was shortly discussed and some museum preparations of eyes illustrating the subject were shown.

Mr. Treacher Collins said that these cysts varied greatly in situation; they were sometimes found in the substance of the cornea, in the Anterior Chamber after cataract extraction and were occasionally caused by a root sheath of an eyelash being carried into the eye. They may be classified into pigmented and unpigmented, the former being due to a separation in the pigment layer of the iris, and the latter being either congenital or due to injury.

Green Vision in a Case of Tabes Dorsalis.—Mr. Work Dodd related the case of an artist, aged 32 years. In 1886 his sight was quite good, in 1891 he had diplopia, from which he recovered. His color vision remained good till 1897, and he complained of defective sight shortly before being seen in July, 1898. When first seen V. was R. $\frac{2}{60}$, L. $\frac{1}{60}$. He had Argyll-Robertson pupils, optic atrophy, and contraction of his visual fields, his gait was ataxic, and he had occasional trouble in passing water. In September, 1898, V. was reduced R. $\frac{1}{60}$ L. hand movements. He then saw everything a bright emerald green; it appeared to him as if there was a green veil hung before his eyes, through which he saw everything; he occasionally saw rose-pink spots through the green veil in places. The colors increased in intensity when he was tired, especially the rose pink. He had also occasional sensations of very brilliant light.

Albuminuric Retinitis in a Child.—Mr. Arnold Lawson and Dr. Suth-

erland read a further note on a case. A girl, aged 12, was exhibited before the Society last year with advanced albuminuric retinitis in both eyes, and symptoms of chronic interstitial nephritis. Two weeks after she was shown to the Society she had uræmic convulsions and absolute blindness, which lasted some days. During the next few months she had headache and vomiting, but no more uræmia. In September she was readmitted to the hospital for cardiac failure; death followed. The whole duration of the illness had been a year and three quarters. *Post mortem* both kidneys were found granular; the heart was hypertrophied, and there was a cerebral hæmorrhage into both ventricles. In the retina exudation of the usual type was found at the central region. Congenital syphilis was suggested as a cause.

Mr. Holmes Spicer thought that the suggestion of congenital syphilis as a cause was interesting. He had now under his care a female aged 20 who had interstitial keratitis with general arterial changes as well as albuminuria; she also had retinal hæmorrhages as well as retinal exudation.

Mr. Lawson replied that Dr. Gutherie's observations led him to believe that this condition is almost always due to congenital syphilis.

Strabismus Fixus.—Mr. E. Donaldson reported a case. A female aged 46 had had convergent squint since childhood; the deviation was so great that the left cornea was almost hidden; under an anæsthetic the eye could not be drawn out, and it was impossible to reach the internal rectus to divide it. The other eye was also fixed in a strongly convergent position, but it was possible to divide the internal rectus; by separating Tenon's fascia freely from the globe the position of the eye was much improved. Snellen had published some cases, all of which were congenital; the condition had been named strabismus fixus by v. Graefe, but the cause was unknown.

The following card specimens were shown:

Mr. Sydney Stephenson: *A case of Hippus.*

Messrs. Brailey & Eyre: *Case of Exophthalmic Goitre and Glaucoma.*

Mr. R. W. Doyne: *Peculiar form of Choroiditis occurring in several members of a family.*

Mr. John Griffith: *Serous Cyst of the Conjunctiva.*

Messrs. Lang and A. H. Thompson: *Two cases of Embolism of the Central Artery of the Retina with escape of the Papillo-Macular Triangle.*

Mr. Reginald E. Bickerton: *Haab's Magnet.*

SECTION ON OPHTHALMOLOGY.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting March 21, 1899. Dr. George C. Harlan, Chairman, in the chair.

Dr. John T. Carpenter, Jr., exhibited *A Patient with Bilateral Extensive Choroidal Hemorrhage in the Macular Region.*—There was in each eye an extensive and nearly symmetrical area of atrophy of the retina and choroid, involving the foveæ. The cause was hemorrhage, occurring in the left eye three years earlier that in the right, from no assignable general cause. There was in each eye absolute central scotoma. The refraction was myopia and astigmatism. The correction that the patient was wearing was an inaccurate one, and she was obliged to use her eyes continuously at the near point, and it is probable that their prolonged and trying use was a contributing factor in the causation of her condition.

Discussion.—Dr. S. D. Risley stated that the two most interesting points concerning this case were the opportunity that had been availed of for the study of the changes from hemorrhage to atrophy of the fundus tissues, and the effect on myopic eyes of the use of badly fitted lenses.

Dr. James Thorington exhibited *A Patient with Congenital Coloboma of the Choroid and Iris in Both Eyes, Without Involvement of the Lenses.*—There was no family history of heredity of this anomaly of the eyes, of hare-lip, or of cleft palate. Each eye showed a large symmetrical cleft in the iris in its lower portion at an axis of 95°, and a broad coloboma of the choroid, extending from the ciliary body up to and embracing the lower half of the nerve, with pigmented edges and scattered areas of pigments, and supplied by a few cilio-retinal and one or two small retinal vessels. The charts of the visual fields are characteristic of the anomaly. No definite history of day-blindness was obtained. The refraction is mixed astigmatism, V. = R. $\frac{6}{30}$, L. $\frac{6}{15}$.

A study of the recorded cases shows that, while partial coloboma of the uveal tract is not uncommon, complete coloboma of the iris and choroid is rare, and it is in combination with the anomaly of the choroid that coloboma of the lenses occur.

Dr. Thorington exhibited for Dr. Oliver two colored illustrations, the first showing the external appearances of coloboma of the iris, the second

of coloboma of the choroid. In the latter the vascular supply was entirely from cilio-retinal vessels.

Discussion.—Dr. de Schweinitz stated that he had seen two cases of coloboma of the choroid and one case of large coloboma of the optic nerve sheath unassociated with ocular defects elsewhere. Drs. Sweet, Carpenter, Risley, Ring, and Harlan also spoke of the various forms of coloboma presenting features similar to those of Dr. Thorington's patient.

Dr. S. D. Risley presented *A Patient Showing the Late Result in a Case of Implantation of Sponge in the Orbit after Enucleation.*—The operation had been performed in June, 1898, nine months before. There was no longer present any evidence of the sponge. Three months after the operation the orbit was well filled with new tissues, but during the succeeding six months this had been absorbed. A good and freely moving stump had been secured, but not better than is often seen after a careful excision.

Discussion.—Dr. Harlan said that at a recent meeting of the Oph. Soc. of Paris, Valude had reported a case in which a stump formed by implantation of sponge in Tenon's capsule had shrunk to one-third of its original size in one year. The consensus of the opinion of the meeting was that sponge implantation after eneucleation had been tried and found wanting.

Dr. Risley presented a brief paper on *The Employment of the Kalt Suture in Critical Cases of Cataract Extraction.*—The histories of three cases of cataract with tremulous iris and ruptured suspensory ligament were reviewed, in each of which the stitch had been introduced before making the corneal section. The vitreous in every case presented as soon as the section was completed, and the lens was extracted in the capsule by aid of the wire loop. Traction was then made upon the ends of the suture until the loop in the stitch was exhausted and the lips of the wound caused to approximate. Under this manipulation the vitreous was returned within the eye, completely in two cases, and all but a small bead at the outer angle of the wound in the third. Recovery was rapid and normal in each case. Dr. Risley believed that the procedure was, in cases where loss of vitreous was imminent, a very useful one.

Discussion.—Dr. Chas. A. Oliver had used the Kalt stitch in a case of traumatic irido-cyclitis and cataract. During the extraction of the right lens under cocaine a large bead of vitreous presented through the corneal incision. The stitch was introduced, the edges of the cut approximated, and the vitreous mass receded. The suture was then tied. The stitch came out on the fourth day, leaving a firm wound.

Dr. Risley gave briefly the history of *Recurrent Rheumatic Iritis* of a

severe type occurring in a man aged 35, with compound myopic astigmatism, in whom recovery had been secured, after repeated attacks, with normal acuity of vision, and without any increase in the myopia. After recovery from the last attack it was noted that a segment of the iris below did not react. The pupil was perfectly round when dilated, but after the influence of the mydriatic had disappeared was pear-shaped. Dr. Risley thought the condition was explained, not by a paralysis of the iris fibers, but by an adhesion between the capsule and posterior surface of the iris, too far back to be demonstrated, but sufficient to prevent expansion or contraction of the segment involved.

Dr. G. E. de Schweinitz presented the history of *A Case of Fistula of the Orbit ude to Caries of the Lacrymal Division of the Ethmoidal Cells*, and described the operative procedures performed by himself and Dr. Walter J. Freeman for its cure.

Discussion.—Dr. Zentmayer related a case of Dr. Wm. F. Norris, in which the operation consisted of crushing through the ethmoidal bone from the orbit. The result was the permanent cure of the fistula. Dr. Harlan referred to the case of a boy of 9 years of age, in which an epiphora of the right eye of some months' duration was followed by the appearance of a bony swelling the size of a split pea above and slightly posterior to the lacrymal sac. The nose had been badly broken six years before, the septum deviated to the right side, and the nares obstructed. After incision several drams of a black fluid escaped from a cavity with smooth walls, apparently lined with mucous membrane which did not communicate with frontal or ethmoidal cells. There was rapid cure, without deformity, and with complete disappearance of the epiphora. Dr. Carpenter referred to a case of fracture of inner wall of orbit with closure of lacrymal duct, in which drainage into nose and prolonged probing failed to cure. Rhinologic examination showed disease of ethmoid cells, but patient passed from under observation.

Dr. Wm. Zentmayer showed *A Case of Tumor of the Orbit with Secondary Involvement of the Lymphatics* in a 5-year-old child. Six weeks earlier a bloody tumor over the right parietal bone had been incised and tapped. There was protrusion of the right eye, but no cerebral symptoms. The skull is enlarged, the sutures and fontanelles open, and the veins of the forehead and lids dilated. The enlargement of the lymphatics is most marked in the right cervical chain. Knee-jerk diminished on the left side. Examination of the blood shows intense secondary anemia. The right eye is proptosed 1 cm., and cannot be replaced. The outward movement is abolished, and the upward limited. Pupils

normal. In the right eye there is choked disk, with minute hemorrhages and marked striations of the retina in the macular region; and in the left eye optic neuritis.

Dr. G. C. Harlan, in a paper entitled *Abscission and Combined Keratectomy*, urged the more frequent performance of abscission of the cornea as a substitute for enucleation of the eye when the disease or injury is confined to the anterior segment of the ball. This operation was formerly done with entirely satisfactory results in many cases which to-day would be submitted to enucleation with the result of unnecessary deformity and annoyance. Panas' "combined keratectomy" differs from the Critchett operation chiefly in placing the incisions and sutures in front of the ciliary body instead of behind it, and seems to be an improvement over former methods. The application of this procedure to cases of painful absolute glaucoma is an important advance.

Dr. Harlan also showed *A Patient in Whom a High Degree of Myopia had Developed Without Changes in the Fundus.*—She was examined under complete mydriasis fourteen years ago, at 15 years of age, and had hyperopia of 0.25 in the right eye. Whereas, now, $\frac{20}{20}$ in that eye, under mydriasis, with—2.75^{s},—0.25^{c}, Ax. 60°, and a perfectly normal fundus. The left eye had a high degree of myopic astigmatism at the time of the first examination and has since become divergent.

Dr. H. F. Hansell described *A Case of Atypical Retinitis Pigmentosa in a Child of 10.*—The pathologic changes were gradual absorption of areas of the retina and choroid at varying distances from the papilla, and an incipient atrophy of both optic nerves. He believed that the case was in the early stages of the disease recently described by Fuchs, namely, atrophia gyrata choroida et retinæ, the characteristic features of which are gradual disappearance of normal retina and choroid in patches arranged in concentric circles with the papilla as the center, and connected by islands of normal structures, and associated with advancing atrophy of the optic nerves.

Dr. Chas. A. Oliver gave a brief report and exhibited sketches of *A Case of Fibroma of the Eyelid* (painful subcutaneous tubercle of Wood).

HOWARD F. HANSELL, *Clerk of Section.*

SCHWARTZ reports two cases of bilateral resection of the sympathetic nerve in the neck, in which he obtained a distinct amelioration of symptoms.

SOCIETY OF OPHTHALMOLOGISTS AND OTOLOGISTS OF WASHINGTON, D. C.

The president, Dr. S. M. Burnett, in the chair.

At a meeting of the Society of Ophthalmologists and Otologists of Washington, D. C., Jan. 20, 1899, Dr. Muncaster exhibited a patient, three years of age, suffering with *Parenchymatous Keratitis*, and read a paper on the subject.

Dr. Richardson opened the discussion by showing some microscopical slides which illustrated this disease.

Dr. Belt said that, we rarely see this form of keratitis in a patient so young as the one presented by Dr. Muncaster. He found that many cases would recur after apparent cure, but ultimately the prognosis was good on anti-syphilitic treatment.

Dr. Newell spoke of a case he treated with powdered extract of supra-renal capsule, with satisfactory results.

Dr. Burnett stated that he had used extract of supra-renal capsule in strabismus operation to lessen the hemorrhage, but had never used it for keratitis. He had noticed in this form of keratitis the skin, instead of being coarse, was as fine as satin, especially in the Negro race. The Germans and French do not agree with Hutchinson, that all cases are due to inherited syphilis. A German physician had investigated a great number of cases in which he found no syphilitic history in the family. He asked, may it not be due to mal-nutrition and not to syphilis?

Dr. Dye said that, in regard to treatment in the case of a child without notched teeth but with syphilitic parents, he had dusted calomel in the eye and used mercury and potassium iodide internally until forced to discontinue the calomel from the child fighting against it. The patient was cured, however, and he questioned whether the local treatment was one of much value.

Dr. Belt expressed the belief that it was now the general opinion that the peg-shaped teeth were more significent of inherited syphilis that the notched teeth. The bleached or satin-like complexion which he had noticed among negroes who had acquired syphilis, he thought was an additional evidence of the syphilitic character of the disease.

Dr. Belt then showed a case of *injury to the eyeball, caused by the ex-*

plosion of a shell or cartridge. The accident occurred several months previous, but there is still considerable ciliary congestion and loss of vision, with a yellowish white-looking nodule just back of and below the lens.

Dr. Wilmer said that he thought it might be a case of suppurative choroiditis or sarcoma from traumatism.

Dr. Suter agreed that it might be a traumatic sarcoma.

Dr. Burnett expressed the belief that, from the length of time since the injury, it was not a case of suppurative choroiditis or sarcoma, but that the patient had had a cyclitis and that the yellowish nodule was lymph and that the retina had become detached. The eye, he said, should be removed.

Dr. French and Dr. Wilmer also thought that immediate enucleation was the proper course of treatment.

A paper on *Astigmatism in the Negro Race* was read by Dr. Fox.

In the discussion of this paper Dr. Belt said that, in an examination of 420 white school children made by him a few years ago, he found that 25 per cent. had astigmatism, while in the same number of colored children he found only 10 per cent. with astigmatism. In the dispensary work of the Episcopal Eye, Ear and Throat Hospital for the years '97-'98, 7 per cent. of the white patients were treated for astigmatism, while of the colored patients only 3.8 per cent. were treated for the same trouble.

Dr. Burnett thought that the statistics given by Drs. Fox and Belt showed that astigmatism had an important bearing on the development of the races. He found that myopia increased with the degrees of civilization. Some years ago he had made an extensive examination in regard to the color sense in the races; he found that color-blindness was less than half as prevalent among the negro as among the white. The normal acuteness of vision is higher among the lower races, being four times as acute among some Africans as in our race. In the hospitals about half as many negroes apply for defective sight as white, even when we include the mulattoes.

One investigator asserted that he could judge the character of the skull by the kind of hieroglyphics the individual made; certain forms of astigmatism being the result of certain forms of skulls. The kind of hieroglyphics varied with the kind of astigmatism. We find that myopia is becoming more prevalent in the negroes as they advance in education.

Dr. Muncaster said he had found in his dispensary that hypermetropic astigmatism was the most common.

Dr. Belt made a brief report of a *Case of Pulsating Exophthalmus*

from Aneurism of the Cavernous Sinus which was improving, and then exhibited to the society a patient upon whom *sponge-grafting in the orbit for support of artificial eye* had been done by him about five weeks previously. The result was very satisfactory.

In discussing this case Dr. Suter expressed the belief that the motion did not appear to be quite as good as in the case of a Mule's operation he had seen, but that in the latter case there was great sensitiveness of the orbit. The patient would not allow the parts to be touched.

E. Oliver Belt, *Sec'y.*

THE MIDLAND OPHTHALMOLOGICAL SOCIETY.

Kansas City, Mo., Feb. 13, 1899.

Dr. Geo. E. Bellows read a paper dealing with the recent *Investigations in Regard to the Ocular Muscles, Tenon's Capsule and the Check Ligaments.* He reviewed briefly the anatomy of those structures, and also the individual and combined actions of the muscles.

Considerable attention was given to the check ligaments, which pass from each muscular sheath to the orbital wall, and to their effect on the movements of the eye.

These ligaments have only recently been appreciated in their bearing upon ocular movements, and they must be taken into consideration practically in a fair proportion of operations for strabismus.

The chief credit for our present knowledge of their meaning and importance belongs to Motais and Maddox.

Dr. Tiffany has had very good results with partial tenotomies in cases of insufficiencies of the ocular muscles.

Dr. Tyree: These investigations of Dr. Bellows are in the right direction, as the question involved in the treatment of defects of the ocular muscles is most important.

The salutary effect of prisms and tenotomies is yet in question.

Dr. Sherer: The terms intorsion and extorsion, as applied to the rotation inward and outward of the vertical meridian of the bulb, would appear to be desirable and acceptable additions to our nomenclature. The function of the check ligaments would seem to be almost as important as the tendons which they check.

Dr. Grove thinks that the point of attachment of the ocular muscles might be where the defect would be found in many cases. The attachment of the other muscles of the body are not always where they should

be, and he does not see why the ocular muscles should not occasionally be defective in that respect.

Dr. F. G. Murphy wished to know the success the oculists present have had in using prisms or partial tenotomies with insufficiencies of the external recti. His experience in tenotomies and prisms with insufficiencies of the external recti, have been much more satisfactory than with the external recti.

Dr. Tiffany reported a case of *Bilateral Congenital Irideremia* in a girl twelve years old. The vision was 20/200 in each eye; + 2.50 sphr. lenses brought the vision to 20/80. She had little power of accommodation, and vision was not affected by a mydriatic. Irregular astigmatism, with little power of accommodation, Dr. Tiffany assigned as the cause for her vision being no better. The ciliary bodies could be plainly seen. Dr. Tiffany also reported two cases of *Chancre of the Conjunctiva.*

CHICAGO OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

A regular meeting was held March 14, 1899, with the President, Dr. Ware, in the chair.

Dr. William H. Wilder presented a case of *Multiocular Cyst in Fornix of Conjunctiva* in a boy, 11 years of age, who had recently developed a multiocular cyst in the fornix of the left lower conjunctiva. This cyst contained serous contents, with degenerated epithelial and lymph cells. On everting the lid the little tumor rolled out like a sausage-shaped mass.

Dr. Wilder also presented a case of *Detachment of the Retina* in both eyes. That of the right was of the complete umbrella-shaped variety; vision of that eye was reduced to about perception of light. The detachment of the left eye was partial and involved the lower hemisphere. In both eyes evidences of degenerative changes of the vitreous could be seen.

Dr. J. E. Colburn, some years ago, while everting the lid to instill atropine, noticed a tumor which presented very much the appearance described by Dr. Wilder. On opening the sac, a piece of pencil graphite, a quarter of an inch in length, was discovered and removed.

Dr. Henry Gradle has seen three instances of cysts of the bulbar conjunctiva, none of them traumatic. They were about the size of small shot. One of them had existed for months without annoyance or irritation, when it suddenly became inflamed, and its contents, previously

clear, turned purulent. A second one may have been unnoticed for some time, but when the patient called it was surrounded by a zone of injection, like a phlyctenule on the bulbar conjunctiva, and was irritating. Yet its contents were perfectly transparent. The third case, a young girl, had had a clear pale cyst for an unknown length of time. All these cysts were extirpated and prompt healing obtained.

Dr. W. F. Coleman saw a similar case about ten days ago. The cyst was punctured and it contained serous fluid. It was situated more to the temporal side and just at the reflex fold, the cyst seeming to be continuous with the hypertrophied portion of what appeared to be the lachrymal gland.

Dr. Casey A. Wood: This case is a good illustration of Nordenson's theory of the causation of detachment of the retina, which, according to his investigations, depends not so much upon stretching of the globe, as in myopia, or to direct violence, as in injury to the eyeball, but rather to changes that occur in the vitreous itself. First, we have choroidal disease, mostly chronic in character, followed by the formation of connective tissue, or strands resembling connective tissue, in the vitreous, and from the contraction of these, with shrinking of the vitreous in part or as a whole, the retina is pulled away from the choroid behind it. In this case, where none of the ordinary causes of detachment are present, we have a good illustration in their proper sequence of the factors claimed by Nordenson to be present in all cases of the non-traumatic forms of retinal detachment.

Dr. Wilder agreed with Dr. Wood that the cause of this detachment of the retina is the shrinkage of the vitreous, the contraction of cicatricial bands, and the formation of new connective tissue. The case is interesting in that it illustrates so well the theory of Nordenson.

Dr. Casey A. Wood reported a case of *Orbital Lipoma.*

H. A. F., aged five months, a robust child of perfectly healthy parents, was brought to Dr. Wood on the second of last November with a yellowish-white growth, evidently subconjunctival, presenting at the outer canthus. The mother believed it to have appeared shortly after birth, and thought that it had grown slowly and uniformly since that time. When the child cries, the tumor becomes more prominent and protrudes between the lids, while its covering appears redder than the corresponding area on the left side. It is not tender to the touch, is freely movable, and the projecting portion may be pushed back into the orbit. With the exception of this growth, the eyeball is entirely normal, and its excursions are not limited in any direction. On November 7th the growth was

removed under chloroform. It proved to be an incompletely encapsulated tumor lying on the anterior surface of the left external rectus muscle, and following the course of that muscle backward into the orbit. It seemed to be attached to the sheath of the latter, and to Tenon's capsule in front, so that it was necessary to remove a few fibers of the muscle itself. In its fresh condition the small tumor formed, when spread out, an irregular oval about 4 cm. long by 2 cm. at its widest part. Dr. Brougham, pathologist of the Passavant Memorial Hospital, kindly examined it and made several microscopic slides for me, one of which is shown this evening. His report is as follows:

"Tumor removed on the 7th of November, 1898, measures 4 cm. by 2 cm. Its upper surface is irregular, and the under side smooth. Yellowish-white in color and evidently mostly composed of fatty tissue. Microscopically it is a pure lipoma, to the under surface of which are attached striped muscle fibers."

Discussion.—Dr. William H. Wilder thinks these are sometimes associated with dermoids. Some three years ago he had a case in which a lipoma sprang from the orbital tissue apparently, about the size of a large hazelnut, and associated with it in the same eye was a dermoid tumor affecting the limbus of the conjunctiva. They were both easily removed without any signs of recurrence.

Dr. Henry Gradle read a paper entitled *Diagnostic Significance of One-Sided Amblyopia.* (See Ophthalmic Record, April, 1899, page 181.)

Casey A. Wood presented extracts from his paper on *The Ocular Evidences of Hysteria,* published in the *American Journal of Medical Sciences,* Jan., 1899, page 42.

Dr. J. E. Colburn reported the following cases:

May, 1891. Mrs. H., aged 32 years; general health good; has been subject to migraine from childhood. At 18 years of age she first noticed that the headaches were ushered in by "blind spells," lasting from one to ten minutes, followed by severe pain in the temples and nausea, lasting from two to ten hours. The attacks occurred once in two to eight weeks. She had frontal and occipital headache nearly every day, sometimes only a feeling of discomfort. Two months ago an attack of migraine was followed by a period of total blindness lasting three days. The eyes were rolled far up into the head, and the patient refused to move about. The trouble passed off without after effects. Three days previous to Dr. Colburn's visit, the patient was seized with the usual migraine symptoms, but the attack was unusually severe. At the time of his visit the patient had been totally blind for forty-eight hours. He found her reclining on

a lounge, complaining of no discomfort except that she could not open her eyes wide nor distinguish light from dark. The iris, which slowly responded to light, was slightly dilated; the cornea and conjunctiva somewhat dry; eye slightly divergent. The approach of objects to the eye — a knife, a lamp, a hot wire, etc., produced no reaction. The only reaction was that of a red glow, whether in the light or dark.

Feeling that this was a case of hysteria, he impressed the patient with the fact of the importance of a remedy he should use — eserine — described minutely the effects as she would be able to feel them, and added the fact that she would be able to read print held close to the eyes, and that by the second day the vision would return to the normal condition. The suggestion resulted as had been predicted. Meanwhile, a calomel purge was advised, followed by strychnia sulphate and iron. As soon as she had recovered her vision, the correction of her hyperopic astigmatism gradually relieved the headaches, and migraine has not returned.

Case II. September, 1894. Miss R., aged 17, a nervous, impressionable girl, working overhard in school, and subject to headaches. She complained of severe, one-sided headache following a general clouding of vision, and a display of flashing light before both eyes. Hot water compresses were applied to relieve the pain during the night, and in the morning the patient awoke blind with the eyes rolled far up. On the fourth day the patient was brought to the office with all the appearances of a newly-blind person. She submitted to the application of the fixation forceps, so that the eye could be dragged down and the cornea and the fundus examined. Eserine and suggestion were used with success. The patient was carefully refracted and the headaches cured.

Case III. Matthew L., aged 15 years, became seemingly blind and partially deaf the day following a punishment with a strap at school, though the night before and immediately following the punishment he was able to land two or three stones on the teacher's person and to hear the sympathizing of his mother.

The symptoms were those of total blindness. An examination revealed no changes in the retina. On making the suggestion he was able to see to the extreme right of the field, and in about two minutes the field gradually became normal. The trouble did not return.

Great care must be taken not to confuse hysterical amblyopia with migraine and uricacidemia amblyopia. The scotoma preceding the headache may, in migraine and uricacidemia, be followed by a more or less lowered vision lasting several minutes or several days, and may be constantly in the original position, or change when it does not occupy

the whole field to various positions in the field. It will vary in intensity during the day, seemingly less in the afternoons, and usually does not recur following the first good night's rest after the head symptoms have disappeared.

Undoubtedly the errors of refraction and the discomfort which they produce have to do with determining the manifestation of the hysteria in the eyes.

Discussion.—Dr. Harold N. Moyer liked the term which Dr. Gradle used of psychical amblyopia, for it is by no means certain that these cases are all hysterical, but all those that are hysterical are psychical, a distinction that may be wisely borne in mind. Where the stigmata of hysteria are present, the diagnosis of these cases is not difficult. But it is well to remember that in some of them organic disease is associated with the psychical amblyopia, and sometimes with other stigmata of hysteria. This is often the source of error, the two conditions being simply associated.

A case presenting stigmata of hysteria is not difficult of recognition. He recalled a case which he saw with Dr. Wilder. The amblyopia was sudden and quite complete in one eye; marked in the other; total deafness to voice upon the same side as the amblyopia, with absolutely normal ear-drums, naso-pharynx, and eustachian tubes. Singularly enough in that case the highest tones were not perceived in the deaf ear, while upon the opposite side the lowest tones up to 128 were not heard. An area of anesthesia extended from the margin of the hair and angle of the jaw to a transverse line drawn around the body at the level of the umbilicus. The left arm was included. There was absolute paralysis of the left arm of three months' duration without electrical alteration. In such a case as this there is not the slightest difficulty in making a diagnosis. The association of the symptoms, the absence of organic trouble, is self-evident in a cursory examination of such a patient.

In contrast to this one a young girl, 11 years of age, had progressive failure of vision for a year and a half. Vision in the left eye was reduced to the perception of light; vision in the right eye was equal to counting fingers at four or five feet. The left, however, on closer examination, was found to present a normally sensitive portion of the retina corresponding to a slight oval area in the temporal side of the retina, amounting to about ten degrees in the visual field. With the left eye she could see nothing, only a perception of light; with the right eye she could count fingers at three or four feet; she could not see the largest type on the Snellen test card within a foot or two, or figures drawn upon

cardboard as, for instance, a triangle made with matches could be seen, but not one of the same size drawn with a pencil. She could distinguish coins, as a penny from a quarter, and a quarter from half a dollar. She readily picked out a ten cent piece from several coins lying on my hand. These Dr. Moyer termed confusion symptoms. This girl presented absolutely no other stigmata of hysteria. There was no anesthesia, nothing in the history of the case, excepting a bad heredity; she had a neurotic mother, that would suggest hysteria other than the disturbance of vision. Vision being reduced to the perception of fingers at the distance mentioned, the room was darkened, objects placed in a certain place, and this child could walk about among them with facility; but if the better eye was bandaged, she stumbled over everything in the room. The question arises, was there a difference between the two eyes? The character of the blindness would lead us to believe that there was a difference in degree. So far as could be determined, she could not see except with a narrow portion of the retina in the left eye. The loss of vision, apparent with the test types, was not shown when the room was darkened.

Dr. William H. Wilder hoped that Dr. Moyer would bring out one interesting test he made in his case of hysterical amblyopia. This was the Snellen test with red and green glasses. When the Snellen spectacles were placed on this patient with, for example, the green glass before the left eye, she not only saw all of the red letters, but also all of the green ones, thus demonstrating that she had much more vision than was supposed in the amblyopic eye. This at once raised the question of simulation.

As far as confusion tests are concerned, most of us have seen cases where patients would carefully avoid objects when placed in front of them. He recalled a young girl whose vision was reduced almost to the perception of light, or at least to counting fingers at a distance of a few feet before each eye; yet if anything was placed in front of her while she was walking along, she would carefully avoid it, or step over it without stumbling. She subsequently recovered entirely.

Dr. Lyman Ware, in determining hysterical amblyopia from other forms, relied upon inversion of the field of vision for colors.

Dr. W. F. Coleman recalled the case of a farmer, about forty-five years of age, in excellent general health, who had complained of some rather obscure cerebral symptoms. There was a doubt as to whether the man had a brain tumor. No changes were found in the fundus. He had some anesthesia on one side. He had a reversal of the color-fields; also a contracted field of vision. The central vision was 20/30, but his own

sensation of loss of vision was out of proportion to his actual vision. He eventually recovered normal vision.

Dr. C. P. Pinckard: The tests referred to by Dr. Moyer as "confusion tests" are comparatively common. In a boy about twelve years old whose vision for letters was reduced to less than 1/10, yet for certain small objects, such as pictures, his vision was practically normal.

Dr. A. E. Bulson, Jr., of Fort Wayne, Ind.: Care must be exercised to distinguish hysteria, a functional disturbance, from malingering, in which the impairment of vision is feigned, the one frequently simulating the other in the character of manifestations, and mentioned the case of sudden blindness occurring in a man applying for increase of pension. His eyes presented a normal appearance. All well known methods of detecting simulation were tried without avail. Prior to a second examination the applicant was discovered playing billiards.

A second case is that of a man who presented himself, complaining of pain and distress in the eye, and a claim of total blindness from date of removal of piece of steel from eye two years previous. On examination the eye appeared perfectly normal. All symptoms subsided and sight returned shortly after taking a few aromatic lozenges for perfuming the breath.

Imperfect Eyes.—According to the examination of 12,000 eyes in children, 6 to 7 years of age, by Steiger, during a period of 3 years, 13.1 per cent were imperfect. He attributes this, in one-half of the cases, to existing astigmatism.—*Corresp. f. schw. Aerte.*

A Trachoma School.—A few months ago there was opened by the city authorities in Milan u school for children afflicted with granular conjunctivitis. The school is an annex of the Ophthalmic Institute, and comprises two rooms, each of which can accommodate fifty pupils. At the present time the total number of children in the school is sixty. When lessons are over the children go to the institute to be treated, and only after treatment are they allowed to go home.—*N. Y. Medical Record.*

NEWS ITEMS.

Personals and items of interest should be sent to Dr. Frank Allport, 92 State St., Chicago.

Dr. H. Bert Ellis has been elected Secretary of the California State Medical Society.

Dr. L. Loran Palmer has been appointed Eye and Ear Surgeon to the Toronto Orthopedic Hospital.

Dr. Willis O. Nance, Chicago, has accepted the professorship of ophthalmology in the Chicago Clinical School.

Dr. George C. Harlan has been elected president, and Dr. Charles A. Oliver secretary, of the surgical staff of Wills Eye Hospital.

Dr. Thomas A. Woodruff has removed his office to 103 E. Adams St., Chicago, Ill., where he will be associated in practice with Dr. Casey A. Wood.

James B. Gibson, M.D., formerly senior surgeon of the Manhattan Eye and Ear Hospital of New York, died in Colorado Springs, Colo., April 10th.

We record the death of J. Samelsohn, of Cologne, aged 48 years, a prominent and popular ophthalmologist and author of numerous works on his specialty.

At the last meeting of the Omaha Medical Society, held April 11th, Dr. Harold Gifford was elected as First Vice-President, and Dr. D. C. Bryant Chairman of the Board of Censors.

Dr. D. C. Bryant is Chairman of the Section of Ophthalmology and Otology of the Nebraska State Medical Society, which holds its next annual meeting in Lincoln, May 9, 10 and 11.

The Missouri State Medical Society meets May 16, 17 and 18, in Sedalia, Mo.

Dr. J. H. Thompson, of Kansas City, is Chairman of the Section of Ophthalmology and Otology. Associated with him in the Section work are W. P. Camp, of Springfield, and James Moores Ball, of St. Louis.

The Midland Ophthalmological Society of Kansas City meets on the third Monday of each month at the Coates House. The society is very prosperous, it is said.

Dr. Hermann Snellen, the famous Professor of Ophthalmology at the University of Utrecht, will resign his chair in the University at the end of the present semester. Herman Snellen, his son, will succeed him.

The Brain of Helmholtz.—Dr. Hausemann, of Berlin, has made an examination of the brain of the late Professor Helmholtz. He reports that it weighed fourteen hundred and forty grams, which is less than one hundred grams above the average weight of a man's brain; that the frontal convolutions were very numerous, and [of an unusual degree of development.—*New York Med. Record.*

The Helmholtz Medal of the *Academy of Sciences*, of Berlin, has been awarded to Prof. Rudolf Virchow. The medal, instituted in 1892, with a capital of $12,000, in honor of the seventieth anniversary of the birth of Helmholtz, weighs 620 grammes, and is awarded every two years. The recipients of it have been Helmholtz himself, du Bois-Reymond, Weierstrass, Sir William Thomson, and Professor Virchow.—*Philadelphia Medical Journal.*

A "Curatorium" for eye troubles exists in St. Petersburg, which sends commissioners through the country districts for the purpose of giving free treatment and advice to those among the peasantry who are suffering from affections of the eyes. The report for the year 1898 states that 33 of these ophthalmological expeditions were sent out during the year to various parts of the empire. On these commissions were 107 oculists and 17 students, who treated 53,828 cases of eye diseases and performed 16,029 operations.

Hirschberg, at a recent meeting of the *Berliner Medicinische Gesellschaft*, reported finding five glass-blowers, out of thirty employed in a factory, suffering from cataract. Other authors have remarked the frequency, and the early age (before forty years), that glass-blowers develop cataract. This has led us to the use of the term Hitzstaar (heat cataract). The statements that cataracts are more common in hot climates than in cold is confirmed in India, where cataracts are often seen in persons of middle age, whereas in colder climates the average age for senile cataract to develop is sixty-two.

At a recent meeting of the Kansas City Ophthalmological Society, Dr. J. W. Sherer read a paper on skiascopy. He recommended using the small plane mirror in a perfectly darkened room, the operator to be quite close to the patient. Dr. F. G. Murphy then exhibited a new model of a circular skiascope, in which the surgeon is able to keep any lens directly in front of either eye of the patient with perfect ease, no matter how much the patient may move about. The instrument is inexpensive, and contains thirty-five lenses. The light can be placed on either side of the patient. Either eye can be examined without moving the patient, by slightly shifting the instrument.

The Use of Ichthyol in Diseases of the Eye.—Eberson, M., (*Klinisch-therapeutische Wochenschrift*, 1898. No. 18, S. 669; *American Journal of the Medical Sciences*, December, 1898,) makes use of a 30 to 50 per cent aqueous solution to which a small percentage of glycerin is added, and of a 5 per cent ointment. Fifteen instances of its use are reported. The conclusions are: (1) That it is a sure remedy for the cure of trachoma in that the course of the disease is shortened and the surfaces become smooth; (2) that this method is especially to be recommended for children; (3) that it quickly cures catarrhal conjunctivitis with or without corneal complications; (4) that it is a powerful remedy for clearing the corneal scars.

The Paris correspondent of the *Standard* says that a Dr. Edwards, a mystical healer, is turning the heads of the Parisians. His lodgings, at 6 Rue Cadet, are crowded with blind, deaf and dumb persons, and with consumptives and others who have been pronounced incurable. Dr. Edwards encourages them to hope for renewed strength, and places his fingers where pain is felt, simulating that he is picking it out and casting

it on the floor. Loie Fuller, the American dancer, is one of his patients. She says she hopes that Dr. Edwards will save her eyesight. The healer is about sixty years old, and has white hair. He was born in Rome, and practiced medicine in Australia until, as he says, he discovered accidentally his power to heal all diseases by the method he now pursues.

Opacity of the Cornea.—Berry, G. A., Edinburgh, (*Edinburgh Medical Journal*, April, 1898; *American Journal of the Medical Sciences*, December, 1898,), recommends for the treatment of opacities of the cornea, due to recent exudation, massage of the cornea. This is best done through the lid. The lid is rubbed quickly and with gradually increasing force over the cornea for half a minute or more at a time, once or twice daily. To do this effectually the rubbing must give rise to a moderate degree of surrouding hyperemia. The massage may be combined with the use of iodine ointment, or a good, and not too strong, stimulating effect may be secured by the daily use of the following prescription:

℞. Olei terebinth ----------3 j.
Olei amygd ----------3 ij.

We quote from the *Southern California Journal:*

Rogmann, as quoted in the Journal of the American Medical Association, concludes a review of the various local anesthetics used in ophthalmology, by expressing his preference for tropacocain (Giesel and Liebermann, 1891). The anesthesia is more complete than with others, more rapid in its appearance and more permanent than with cocain. It effects even inflamed tissues. Mydriasis is rare and slight. It has antiseptic properties, and the solution keeps a long while, and is much less toxic than cocain. He uses a 3 per cent solution with marine salt, 6 per 1000, which deprives it of all irritating properties. The anesthesia is so prompt that for the extraction of a foreign body the cornea can be scratched almost immediately after the instillation of a single drop. Two drops in the conjunctiva opposite each muscle are sufficient for strabismus operation. In some cases the consecutive painful reaction seems more pronounced than after other anesthesia.

The sixty-seventh annual meeting of the *British Medical Association* will be held in Portsmouth, England, August 1st, 2d, 3d and 4th, 1899.

The Section in Ophthalmology will be presided by Simeon Snell, with

L. Maybury and Treacher Collins as vice-presidents, and Vernon Ford and Arnold Lawson as secretaries.

Papers to be presented must reach one of the secretaries not later than June 24th. Portsmouth being a large military center and naval port, it is hoped that a considerable number of naval and military medical officers will attend the meeting of the Association, and the following subject, therefore, has been chosen for discussion. "The Visual Tests Employed in the Navy, Army, and Mercantile Marine, and their Efficiency." It is also proposed to hold a second discussion upon, "The Pathological Significance of Sympathetic Irritation and its Connection, if any, with Sympathetic Ophthalmitis."

Papers at the sectional meeting must not occupy more than fifteen minutes in reading, and no subsequent speech must exceed ten minutes.

Slowness of Perception of Signals.—The *Philadelphia Medical Journal* (March 25th) contains an item in regard to the examination of railway employes which suggests a very possible danger that has been hitherto largely overlooked. Dr. Valentine, of the Long Island Railroad, finds that while color-blindness, heretofore regarded as the chief element of peril, is comparatively rare, it is not uncommon to meet with abnormal slowness of sight or limited range of vision. Most of those with these defects are those of middle life or beyond. Slowness of perception of danger signals would naturally be as serious a cause of risk as partial color-blindness, and it is a little remarkable that more has not been made of it than is the case. The difficulty being throughout a psychic one, as some have thought color-blindness might be in some cases, it is not hard to conceive its occurrence in the early stages of general decadence. At the same time it is also conceivable that it may be compensated for by special attention, and that the tests, not reproducing all the actual conditions, might to some extent mislead the examiner. The subject is one that ought not to be, and we presume is not, neglected by railroad medical examiners generally.—*Journal of Amer. Med. Asso.*

Dr. Jacob C. Denise, one of the best known physicians of Omaha, died in that city January 20th, as the result of la grippe. He was seventy years of age and graduated at the Jefferson Medical College in 1855, and commenced practice in Dayton, Ohio. He was a surgeon in the War of the Rebellion. He located in Omaha in 1867, and since then has always been closely associated with medical affairs in Omaha, and in the

State of Nebraska. He held many medical positions of honor and trust, and was one of the founders of the Omaha Medical College, in which institution he occupied the chair of ophthalmology and otology. As an evidence of the respect in which he was held by his colleagues, we print the resolutions adopted by the faculty of the Omaha Medical College at a meeting held January 21, 1899:

WHEREAS, Our colleague, Dr. Jacob C. Denise, has by death been removed from our faculty;

WHEREAS, His noble and strictly ethical life was, during his sojourn with us, a grand example to all his professional associates, and one that we, his colleagues, do commend to the students of our college as a high standard in all matters relating to true manhood; therefore,

RESOLVED, That we, in company with the students of the Omaha Medical College, attend his funeral in a body; that the college exercises, out of respect to the memory of the deceased, be dispensed with on the afternoon of the day of his funeral, and that the lecture room in which he labored so successfully be appropriately draped in mourning for a period of thirty days.

THE following incomplete list of recently issued works on the eye are from the pens of American authors and editors, and might with much profit find a place in every ophthalmologist's library: "An Essay on the Nature and the Consequences of Refraction," by F. C. Donders. Edited by Dr. Charles A. Oliver, Philadelphia. P. Blakiston's Son & Co. 1899. 81 pp. $1.25.

"Retinoscopy (or Shadow Test) in the Determination of Refraction at one Meter Distance, with the Plane Mirror." By James Thorington. Third Edition. P. Blakiston's Son & Co., Philadelphia. 1899. 86pp. $1.00.

"A Practical Handbook on the Muscular Anomalies of the Eye." By Howard F. Hansell and Wendell Reber. Twenty-eight illustrations and one plate. P. Blakiston's Son & Co. 1899. 182 pages with index. $1.50.

"Ocular Therapeutics for Physicians and Students." By F. W. Max Ohlemann (Minden, Germany). Translated and edited by Charles A. Oliver. P. Blakiston's Son & Co. 1899. 274pp. with index. $1.75.

If the ophthalmologist decides to confine his study of general diseases to one publication, there can hardly be found a more satisfactory compendium of progress in surgery and medicine than "Sajon's Annual and Analytical Cyclopædia of Practical Medicine. This

appears in illustrated monthly volumes (of about 600 pages) and is published by the F. A. Davis Co., Philadelphia, New York and Chicago, forming a worthy successor to their well known Annual. The subjects are reviewed in alphabetical order and will be continued through the year.

Medical Gleanings from Roman Egypt.—The *Lancet* for February 25th says that it is probable that no archæological literary discovery of the expiring century will in future be so celebrated as the rescue from the sands of the Egyptian Fayoum of more than ten thousand complete and fragmentary papyri by the explorers acting under the auspices of the "Græco-Roman Branch of the Egyptian Exploration Fund," a society which at its commencement owed much to the late Sir Erasmus Wilson. A selection from some fourteen hundred documents, the greater part of which are at Oxford, and the minority at the Ghizeh Museum, has been made by Messrs. Grenfell and Hunt, who have carefully edited about a hundred and fifty of them, and published them with a commentary in a volume entitled *The Oxyrhynchus Papyri:* Part I, with eight facsimile plates. First in importance is the now famous portion of a "Logia," or collection of "Sayings of our Lord." There are also pieces by Sappho, Thucydides, Plato, and other classical writers. The first papyrus of medical interest is No. 39, which is from the military archives of Oxyrhynchus, and is the certificate for the release from army service of one Tryphon because of defective eyesight. It reads thus: "Copy of release, dated and signed in the twelfth year of Tiberius Claudius Cæsar. Release from service was granted by G. Vergilius Capito, præfect of Upper and Lower Egypt, to Tryphon, son of Dionysius, weaver, suffering from cataract and shortness of sight of the metropolis of oxyrhynchus. Examination was made at Alexandria." Another papyrus gives an account of a lawsuit relative to the identity and the custody of an infant who had been placed with a baby farmer. Papyrus No. 51 is the report of a medical officer upon a case of suicide, and is dated A. D. 173. A similar document is to be found in the large collection of Greek papyri in the Berlin Museum. The present one is as follows: "To Claudianus, strategus, from Dionysius, son of Apollodorus, son of Dionysius of Oxyrhynchus, public physician. I was to-day instructed by you through Heraclides, your assistant, to inspect the body of a man who had been found hanged, named Hierax, and to report to you my opinion upon it. I therefore inspected the body in the presence of Heraclides at the house of Epagathus in the Broad Street quarter, and found it hanged by a noose, which fact I accordingly report."—*New York Medical Journal.*

The Degree of "Doctor of Ophthalmology."—We have before us the announcements of two colleges located in Chicago, which confer the above degree. One seems to encourage instruction by correspondence. Its course consists of a series of lectures, which if pursued with diligence and an earnest desire to learn the science of optics, will enable one to become a thorough and practical optician. They further guarantee to teach as much as any other institution, and more than a great many, no matter where, when or what their method. The course is intended to cover a period of eight weeks, but we are informed that if a student applies himself he may thereby lessen the time. An outline of the course is given, which includes eight lectures. The first deals with optics and their practical application, and the last with the ophthalmoscope, retinoscope, asthenopia, orthophoria, strabismus, prisms, drugs, diseases, and ophthalmoscopic diagnosis.

Perhaps the most important rubric is the following:

Issuing Diplomas and
Conferring of Degrees
at the Conclusion of the Term.

The diplomas, we are informed, are 17 x 22 (it is not stated whether feet or inches), and present a handsome appearance. "Going," it is said, "as they do from this great city, they carry prestige with them and always leave a good impression." The fees for this course are placed at the nominal sum of $25. It is not definitely stated whether postage is, or is not, included. It is stated in the announcement that this is a regularly incorporated institution, hence the degrees are legal.

Another school is organized on a somewhat different plan. Its announcement is more ornate, but the range of information is substantially the same, though attendance upon the school is apparently required. The curriculum is divided into six days, thus following the Scriptural injunction, "Six days shalt thou labour and do all thy work." A page in the announcement is devoted to what is taught on each day. To avoid confusion they are printed in different colored inks; thus the first day is in a striking red, the second is appropriately set forth in green, the third in a pale brown, the fourth appears in a refulgent red; the fifth, which includes the pathology of the eye, in a deep purple; the sixth, in which there is a recapitulation of the entire curriculum, in green. At the bottom of the page is a beautiful scroll containing the words "finis."

The closing page of this announcement is printed in a somber black, and contains a word about the degree. Nothing is said as to the size of the diploma, but we are told that the word "doctor" in its original sense

meant teacher. There is also a statement that this is a regularly incorporated institution, and therefore its degrees are legal. It is this latter clause that gives the announcement a sting. It is true that these colleges are incorporated, and that the great State of Illinois confers through these corporations the degree of "Doctor of Ophthalmology." The latter is conveniently and briefly written by its fortunate possessor, "Oph. D." —*Medicine.*

A contributor to the *Optical Journal Supplement* contributes an article for that journal in which he enumerates some of his ideas concerning the performance of refraction work by opticians. They are sufficiently explicit, pointed and comprehensive to be of interest. We therefore append them:

HINTS AND MAXIMS FOR OPTICIANS.

1. Remember that it is the optician's business to test eyes; therefore do not lose too much valuable time trying to diagnose error in refractions objectively.

2. Use all the best subjective methods at your command, but begin and finish with the test lenses.

3. Send to the oculist all cases which cannot successfully be tested without mydriatics, the ophthalmoscope, retinoscope, or ophthalmometer; and in the present light of practical subjective optometry they should be few indeed.

4. The pin-hole test should be good enough for the optician; anything further is outside of his province, and it is good policy to avoid it.

5. Do not expect persons with eye diseases to be fitted with glasses, but refer them to proper medical practitioners.

6. Test all eyes for muscular insufficiencies, but do not order prisms until you are positive that the correcting non-prismatic glasses have failed to do their duty after having been used a reasonable time, supplemented with perfect rest of the eyes from near work if necessary.

7. Do not in ordering spectacles rely too much on rules, few or thousands; every case is peculiar.

8. Cultivate friendly relations with medical practitioners by sending to them patients recommended by you, with letters, and in most cases you will find them reciprocative.

9. When ordering compound lenses for your patrons, be sure and have them make a deposit, for which you give a receipt, stating that balance should be paid on delivery, etc.

10. In doubtful cases make your price so that you can afford to change the glasses, gratis if unsatisfactory.

11. Do not lose your temper when patrons return the next day or shortly after receiving the glasses, but good naturedly try to explain to them that it is necessary to give them a fair trial, which often takes some time.

12. Most people you will find to be more or less dissatisfied with the glasses if ever so correctly fitted. In the beginning do not let this discourage you.

13. Do not warrant a fit, but tell your patrons that you will try and do the best you know how, and in doubtful cases, if necessary, test them over again and furnish another set of lenses for the same price.

14. Cases with astigmatism. It is often good policy to test such eyes a number of times on different days before ordering the glasses.

15. Should you be in doubt about the strength of the glasses to order, in such cases it is good policy to tell your patrons that their case is largely experimental, and that the glasses would probably have to be changed several times at stated periods; in such cases do not fail to make your price accordingly.

16. Do not be too positive in your infallibility, for we are all liable to make mistakes; although glasses may be correctly fitted in theory, still we may find that practically something different is wanted.

17. You cannot make a uniform rate or scale of prices for glasses. Your inborn tact must tell you when and how, for it is not so much the glasses after all, but the amount of your responsible experience and practical knowledge which are some of the principal factors in setting the price.

18. Try to be as charitable as possible, do not set your prices too high for the poor, the rich are able to pay more, but make your prices as reasonable to rich and poor; overcharge nobody.

We submit the program for the Ophthalmological Section of the *American Medical Association.* Addresses (by invitation) are:

"Advances in the Surgical Treatment of Strabismus." Dr. Edmond Landolt, of Paris.

"Some Points in the Symptomatology, Pathology and Treatment of the Sinuses Adjacent and Accessory to the Orbit." Dr. Chas. Stedman Bull, of New York City.

"The Rise of Ophthalmic Surgery in the United States of America." Dr. Charles A. Oliver, of Philadelphia.

Papers will be presented to the Section as follows:

1. "Aluminum Spheres as a Substitute for Glass Balls in Mules' Operation." D. C. Bryant, Omaha, Neb.

2. "Treatment of Trachoma by Cupric Electrolysis." George F. Keiper, Lafayette, Ind.

3. "Fractures of the Orbital Plate of the Frontal Bone, with Report of Cases." J. O. McReynolds, Dallas, Tex.

4. "On Seeing the Capillary Circulation in One's Own Retina." C. E. Norton, Lewiston, Me.

5. "Uncommon Expressions of Ethmoidal Sinus Disease and its Ocular and Orbital Symptoms." Robert Sattler, Cincinnati, Ohio.

6. "Subjectoscope or Some Subjective Visual Sensations." Hamilton Stillson, Seattle, Wash.

7. "Nutrition of the Crystalline Lens and its Relation to Cataract Formation." Lewis Stricker, Cincinnati, Ohio.

8. "Excessive Myopia: When Should We Operate and How?" Andrew Timberman, Columbus, Ohio.

9. "Quinin Blindness in a Young Child." H. Moulton, Fort Smith, Ark.

10. "Nasal Stenoses in Their Relation to Ocular Disturbances." Bryson Delavan, New York City.

11. "Eye Troubles Attributable to Nasopharyngeal and Aural Disturbances." Joseph A. White, Richmond, Va.

12. "Diseases of the Accessory Sinuses in Their Relation to Diseases of the Eye." J. H. Bryan, Washington, D. C.

13. "Cyst of the Iris Following Iridectomy for Cataract Extraction." S. C. Ayres, Cincinnati, O.

14. "Relation of Accessory Cavities to Ocular Affections." C. R. Holmes, Cincinnati, Ohio.

15. "Ocular Manifestations of Arteriosclerosis, with Report of Cases." Charles H. Beard, Chicago.

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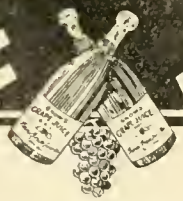

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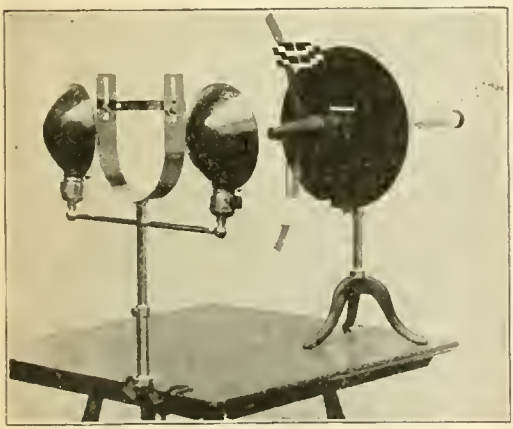

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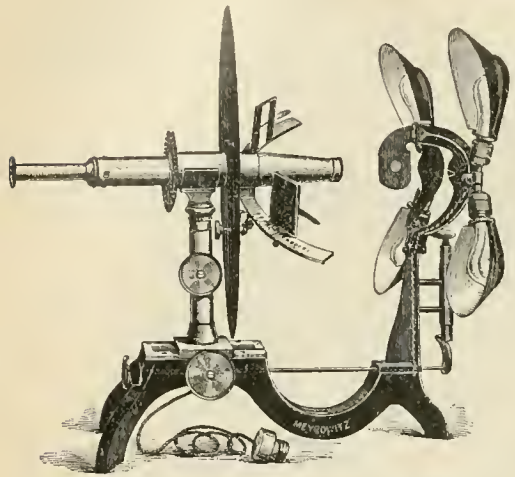

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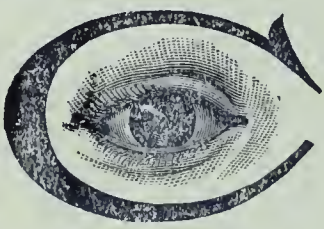
TRADE  MARK

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